

A Review of



UC Merced

# OPENING THE CENTRAL VALLEY



## CALIFORNIA POSTSECONDARY EDUCATION COMMISSION

JUNE 1999

COMMISSION REPORT 99-2

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## Summary

This report reviews the decision by the University of California's Board of Regents to create a new general campus -- the system's first in 40 years -- near the City of Merced in the San Joaquin Valley. The University intends to open the new campus in fall 2005 with 1,000 Full Time Equivalent Students which will grow to 5,000 FTES by fall 2010.

The Commission is required by law (Education Code 66903 and 66904) to review "the need for and location of" all proposals for new campuses and educational centers presented by any of the three public higher education governing boards. This report, which follows the Commission's *Guidelines for the Review of Proposed University Campuses, Community Colleges, and Educational Centers*, provides a planning history of the proposed campus, discusses the University of California's systemwide physical capacity to enroll new students, and considers a number of review criteria, including potential enrollments, alternatives to building the campus, academic planning, possible conflicts with other institutions in the region, and potential construction and operating costs.

Based on this analysis, the report concludes that the University of California at Merced should become a reality and recommends to the Governor and the Legislature that the campus be approved. It also urges the University to be innovative in its academic planning and to provide a clearer indication of potential construction costs.

The Commission adopted this report at its meeting on June 14, 1999. Additional copies of the report may be obtained from the Commission at 1303 J Street, Suite 500, Sacramento, California 95814-2938; telephone (916) 445-7933. This report is available on the Internet; please visit the Commission's home page at [www.cpec.ca.gov](http://www.cpec.ca.gov) for further information. Questions about the substance of the report may be directed to William L. Storey, Chief Policy Analyst of the Commission, at (916) 322-8018, or Joan S. Sallee, Senior Policy Analyst, at (916) 322-8011.

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# Opening the Central Valley

## *A Review of the Board of Regents' Proposal to Build the University of California at Merced*



**CALIFORNIA POSTSECONDARY EDUCATION COMMISSION**  
1303 J Street ♦ Fifth Floor ♦ Sacramento, California 95814-2938



COMMISSION REPORT 99-2  
PUBLISHED JUNE 1999

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*I will open rivers in high places, and fountains in the midst of the valleys:  
I will make the wilderness a pool of water, and the dry land springs of water.  
And it shall come to pass, that thy choicest valleys shall be full . . .*

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# 1

## Conclusions and Recommendations

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### **Summary of the proposal**

This report reviews the University of California's proposal to establish a tenth campus near the City of Merced in the San Joaquin Valley. If built and opened on the projected date of fall 2005, it will be the first new University campus to be constructed in 40 years.

Such a span of time is remarkable given that California's population has never ceased to grow, increasing by about 15 million people since 1965 to its current 33.5 million. Another four million Californians are expected to be added to the State's population by the time the campus opens in fall 2005. In 1965, there was one University general campus for each 2.3 million residents of the State. Today, there is one University campus for each 4.2 million residents; if UC Merced opens in fall 2005, there will still be only one for each 4.2 million California residents.

The University's specific proposals are these:

- To build a new campus -- with full services, including undergraduate and graduate instruction, research, and public service -- just to the northeast of the City of Merced in the San Joaquin Valley (See Displays 1, 2, and 3 in Part Two of this report);
- The site will consist of 2,000 acres that are part of a 10,300-acre tract currently owned by the Cyril Smith Trust and the Virginia Smith Trust;
- The University of California at Merced will open in fall 2005 with approximately 1,000 Full-Time-Equivalent Students (FTES), of which about 10 percent will be graduate students;
- The campus will grow by 800 FTES per year until it reaches 5,000 FTES in 2010;
- The University anticipates that this campus will serve as a "hub" for a program of distributed education throughout the San Joaquin Valley, with physical centers located in Modesto, Merced, Fresno, Bakersfield, and possibly other locations to be determined in the future; and
- The University intends to make UC Merced a full research university with strong engineering and science programs, and with an emphasis on environmental research of concern to the Valley/Sierra Nevada ecosystem.

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### **The Commission's statutory responsibility**

The Commission's review of the University of California at Merced proposal derives from its statutory responsibility (Education Code 66903 and 66904) to review any and all proposals for new campuses and educational centers that may be offered by the governing boards of the three systems of California public higher edu-

cation. Over the years, that responsibility has been discharged with some frequency in the cases of the California State University and the California Community Colleges, with numerous reviews dating back to the Commission's origins in 1974. Even before that date, the Coordinating Council for Higher Education reviewed new campus proposals between 1961 and 1974. Those reviews included the State University's Bakersfield, San Marcos, and Monterey Bay campuses, several community college campuses, and dozens of educational centers in both systems. However, this is the first time that the Commission or the Council has ever reviewed a proposal for a new University of California institution.

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*Commission  
guidelines for  
review*

This first review is contained in the sections that follow this introductory chapter. It conforms to the Commission's *Guidelines for Review of Proposed University Campuses, Community Colleges, and Educational Centers* that support the statutory obligations mentioned above (CPEC, 1992b). The *Guidelines* endeavor to give definition to the Commission's analysis of new campus proposals by focusing particularly on the issues of enrollment demand, geographic location, possible alternatives, and projected costs. Other issues such as academic planning, service to disadvantaged students, effects on other institutions, and the provision of student services are also important. However, they generally fall into a supportive tier of concerns compared to the seminal issues of sufficient population to support the facility, the consideration of reasonable alternatives, the choice of a prudent location, and general affordability. If the analyses of these issues produce positive conclusions, then secondary and tertiary questions can be addressed; if the conclusions with respect to the seminal issues are negative, however, then it is likely that other questions will not be asked.

There is a further consideration that affects only the University of California. In prior reviews of proposals from the California State University and the California Community Colleges, the Commission has seldom considered statewide issues -- since regional criteria will usually suffice for those two systems. However, because the University of California is considered a statewide institution, it is imperative to determine both physical capacity and enrollment demand for the entire system on a statewide basis. In doing so, the Commission has concluded that the need for an additional University campus is clear and even compelling.

Some of the secondary issues surrounding this proposal are troubling, particularly the issue of affordability, and may remain so for some time. For example, while the University has developed a useful vision for the Merced campus, there is no academic plan as yet. That plan will not be developed until the Board of Regents chooses a chancellor, and a founding faculty is in place to turn the vision into specific programs. That plan will become part of the campus's larger long-range development plan (LRDP), which will provide the details on staffing, programming, services, and costs that are now mostly absent. That absence has made the Commission's analysis more difficult, particularly with regard to costs.

In many ways, although the need for a new campus is apparent, and the outside observer can gain a general view of what the campus will look like in five or ten years, the cost

issues remain the most intractable. The electorate's passage of Proposition 1A in November 1998 provided the first identifiable funds for the new campus, yet it is clear that the amount involved -- \$27.5 million for each of the years 2000-01 and 2001-02 -- is woefully inadequate. The University's current estimate of the cost of opening the doors in fall 2005 is \$250 million, a figure that unfortunately contains almost no detail. Moreover, the estimate suggests that another \$150 million will be needed between 2005 and 2010. Clearly, the identification of a revenue stream to build the campus may represent the most important imponderable as planning moves forward.

In spite of that problem, the Commission believes that planning should proceed because the campus is needed for a growing State with growing needs. This major project has large questions that have not been fully answered, yet that is not altogether surprising in a proposal of this magnitude, complexity, and sophistication. Challenges surely remain, but the Commission is persuaded that there are considerable forces arrayed on the side of meeting them. The Commission is also persuaded that the University has assembled a highly competent team of professionals who are dedicated to bringing this campus into existence -- an element that should not be underestimated when contemplating the chances for the new institution's success.

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## **Conclusions**

Acting pursuant to its statutory mandate and its capacity as the State's long-range planning advisor, the California Postsecondary Education Commission offers the Governor and the Legislature the following conclusions on the advisability of building the University of California's tenth campus near the City of Merced:

1. *Statewide Enrollment:* Between 1998-99 and at least 2010-11, the University can expect stronger enrollment demand than it has experienced over the past five to ten years. The demand rate should crest in 2008, after which the University will continue to grow, but at a slower rate. According to projections from the Demographic Research Unit of the Department of Finance, enrollments between 1998-99 and 2010-11 should increase by 58,633 students.
2. *Statewide Physical Capacity.* At the present time, the University has very little additional capacity on a systemwide basis, although small enrollment increases can be accommodated at the Irvine and Riverside campuses. In future years, spanning the present to the year 2010-11, capacity deficits will continue to grow if additional space is not constructed or other measures introduced to expand existing capacity.
3. *Possible Alternatives for Expanding Capacity.* Various suggestions for increasing capacity have been advanced, including: (1) using off-campus centers; (2) extending summer sessions or terms; (3) expanding instructional days, weeks, or months; (4) raising the enrollment ceilings of existing campuses; and, (5) using technology to increase the existing enrollment. Some or all of these suggestions may have merit, but even if all are implemented at aggressive levels, there will still be a need to build the Merced campus.

4. *Ability to Attract Students.* The University has proposed, and the Demographic Research Unit of the Department of Finance has approved, an opening fall 2005 enrollment of 1,000 students and a fall 2010 enrollment of 5,000 students. Overall, while the Commission differs with the University on some of the details, the proposed enrollment levels appear to be reasonable and achievable.

The Commission's primary issue with the enrollment projection lies in the University's assumption that Central Valley freshman participation and community college transfer rates to the existing general campuses will remain stable when the new campus opens. Based on past experiences with other new institutions, the Commission believes it likely that some students who may have chosen to travel to an existing campus will instead choose to remain closer to home and enroll at Merced.

5. *Graduate Enrollments.* The University proposes to enroll graduate students at the level of 10 percent of total enrollment, growing to 14 percent by 2014-15. The Commission believes that graduate enrollments at these levels are reasonable.
6. *Programmatic Alternatives.* Given both the University's statewide capacity limitations and enrollment pressures, the Commission sees no reasonable alternative to building the Merced campus. Options such as the use of off-campus centers, electronic delivery systems, extended schedules at the existing campuses, and even the shared use of facilities with other institutions are either already contemplated to relieve enrollment pressures or are impractical for various reasons, including costs.
7. *Geographic Alternatives.* The Commission believes the University has given thorough consideration to alternative locations for the new campus. Initially considering about 100 different locations, the University culled the initial list in stages to eight, and then three, finalists that were studied in considerable depth and at considerable cost, including the expenditure of \$1.5 million for programmatic environmental impact reports. While it is likely that no site is perfect, the Commission believes that the Board of Regents has exercised due diligence in the site selection process.
8. *Academic Planning.* Planning for the University's tenth campus must necessarily be a difficult, iterative, and seemingly awkward process. Many groups must be involved; many perspectives must be considered; and the pressure for a definitive academic plan must be balanced with the need to allow the new chancellor and founding faculty the opportunity to apply their vision to the first new American research university to open in the 21<sup>st</sup> century. A further balance needs to be maintained between the strengths of a traditional structure for a University of California campus, and the need to forge innovative directions for programs and organizational structures that will meet both the changing needs of society and the unique needs of the Central Valley. The Simmons

Report, issued in November 1997, pushed the boundaries of thinking about this new campus in a way that appears to have been modified into more traditional channels in successive reports.

9. *Geographic and Physical Accessibility.* With regard to physical accessibility, the environmental impact report identified a number of problems. Many of these issues are not within the University's control because they involve transportation access to the campus. Many existing roads will have to be improved, and entirely new roads built. Unfortunately, and as noted in Conclusions 12 and 13 below, the University's Needs Study provides few clues as to the exact nature and extent of the improvements that will be needed and the mechanisms by which they will be financed.
10. *Social and Demographic Characteristics.* The University has provided an adequate overview and summary of the social and demographic characteristics of the Central Valley, and has identified many of the challenges it will face in its efforts to serve historically underrepresented students. The University is well aware that Central Valley participation rates to its existing campuses are less than half of the statewide average, and it has introduced a number of initiatives to raise those rates substantially.
11. *Effects on Other Institutions.* The University has received widespread support for the proposed Merced campus from other institutions in the Central Valley, with none indicating any adverse impact on their programs or facilities. Given population growth rates in that region over the next 10 to 15 years, the Commission is satisfied that UC Merced will not adversely affect current enrollment levels at any existing institution. Several institutions, however, strongly urged the University to offer a collaborative spirit to its neighbors.
12. *Consideration of Needed Funding and Economic Efficiency.* The University has provided a reasonable analysis and projection of operating costs from the present to the final year of the projection in 2010-11. This projection provides sufficient detail to afford analysts a good overall view of campus costs on a yearly basis. Those costs initially will be quite high -- averaging about \$29,000 per student -- but will soon be reduced to approximately \$13,700 per student as the campus grows and economies of scale take effect. Such costs are typical of new campus starts, and are proportional to those experienced in the 1960s for the Irvine, San Diego, and Santa Cruz campuses.

Comparable detail is not available for capital costs. At present, the University estimates that initial capital costs to open the campus in 2005 will be \$250 million, with another \$150 million to expand to an enrollment of 5,000 students. However, there is no analysis to support that figure, and therefore, no way to conclude if the estimate is reasonable. The Commission believes the University needs to take far greater care in developing a realistic cost model for the construction of the campus. Moreover, it needs to be more candid in sharing that analysis and model with the Governor, the Legislature, and the Commission.

13. *Creating a Source of Funds.* The largest open question surrounding this proposed campus relates to funding. At present, only \$55 million has been identified from Proposition 1A that can be directed to the campus, and the University has not indicated to the Commission what other funding sources may be available. Further, even if the \$250 million figure mentioned in the previous conclusion above is reasonably accurate, it does not include funding for off-site infrastructure that may be even higher than for on-site construction. The Commission believes that much more information will have to be developed on this issue before prudent decisions can be made about actually constructing this campus.

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- Recommendations**
1. **The Commission recommends to the Governor and the Legislature, pursuant to its statutory responsibility contained in Sections 66903 and 66904 of the Education Code, that the University of California at Merced be approved as the tenth campus of the University of California system.**
  2. **The Commission recommends that the Tri-College Center at Merced College be considered as an approved educational center for all three public systems of higher education.**
  3. **The Commission recommends that, as the University creates educational centers of the University of California at Merced in the Central Valley (e.g. Modesto, Fresno, Bakersfield), it should conform to the Commission's *Guidelines* (CPEC, 1992b) in instances in which regular credit instruction is offered, and where enrollments have reached, or will reach within three years of the center's opening, at least 500 full-time-equivalent students.**
  4. **As academic planning for the new campus proceeds, the Commission urges the University to maintain the broad, rich vision enunciated in early planning efforts, and to resist the temptation to replicate conventional programs and practices as the form and substance of the new campus takes shape. The Commission believes the University should make every effort to be innovative in its research and instructional programming and pedagogy, to use technology to the fullest extent appropriate, and to extend its programs and services beyond the borders of the campus.**
  5. **The Commission recommends that the University continue and enhance the spirit of collaboration and cooperation with other institutions of higher education in the Central Valley to avoid any possible duplication of effort, and to extend resources and services to all of the residents of the region.**
  6. **The Commission recommends that the University develop a detailed capital outlay plan for the UC Merced campus. That plan should identify the types of facilities (instructional, research, library, media, administrative, etc.) and infrastructure to be constructed through at least the year 2010, with cost estimates attached to each type of facility, and an overall cost estimate on a year-by-year basis. The University should also consult with entities and**

**jurisdictions beyond the campus to develop estimates for the type and cost of off-site infrastructure. Specifically, the Commission recommends that:**

- a. The University report to the Commission in October 1999 concerning its five-year capital outlay budget plan for the UC Merced campus through 2005;**
  - b. The University report to the Commission in October 1999 concerning any changes it feels are appropriate in its enrollment projections in light of the Commission's report, particularly regarding community college transfers;**
  - c. The University report to the Commission in October 1999 concerning its outreach efforts in the Central Valley to both high school and community college transfers; and**
  - d. The University report in the summer of 2000 -- or as soon as reasonably feasible following Regental approval -- concerning the contents of the Long-Range Development Plan for the UC Merced campus.**
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# 2

## Background to the Proposal

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**Introduction** Since the inception of the *Master Plan for Higher Education, 1960-1975*, the California Legislature has assigned to the California Postsecondary Education Commission -- and to its predecessor, the Coordinating Council for Higher Education -- the responsibility for overseeing the orderly growth of public higher education in the State. While the Governor and the Legislature have always maintained ultimate authority for final approval of new institutions, they have never overridden a recommendation from either the Commission or the Council about building a new campus or the appropriateness of a new site.

The specific Education Code sections that assign oversight responsibilities to the Commission include the following:

**66903 (5).** It [the Commission] shall advise the Legislature and Governor regarding the need for and location of new institutions and campuses of public higher education.

**66904.** It is the intent of the Legislature that sites for new institutions or branches of the University of California and the California State University, and the classes of off-campus centers as the commission shall determine, shall not be authorized or acquired unless recommended by the commission.

A further section (E.C. 89002) applies only to the California State University, but is consistent with the two noted above.

As the code sections indicate, the Legislature in the 1960s made clear that it wanted the Coordinating Council to provide broad advice on long-range planning matters, including “the need for and location of new institutions” of higher education. At the time, this language (E.C. 66903[5]) was taken to mean that the Council was to conduct studies of the entire statewide planning environment, to examine enrollment growth and fiscal resources, and to suggest not only the number of new campuses that might be required in future years, but the general locations in which they might be built. This led to a series of reports generically referred to as the “additional centers studies,” the last of which was conducted in 1968. When the Council was replaced by the Commission, the Legislature specified that a slightly stronger and more specific charge was necessary by including the statement of intent contained in Section 66904 as well as retaining the general charge to review issues of “need and location.” In this way, the Commission was given a responsibility never offered to the Council. The former agency had only a broad and general long-range planning responsibility that could be discharged independently of any proposal for a specific new campus or educational center. On the other hand, the Commission has been required to review specific proposals from each of the three public systems since 1974.

Pursuant to these Education Code sections, the Commission developed guidelines under which it would review new campus and educational center proposals in 1975. These administrative procedures and criteria for evaluation of proposals were then revised in 1978, 1982, 1990, and 1992.

The most recent version of these administrative principles was entitled *Guidelines for Review of Proposed University Campuses, Community Colleges, and Educational Centers* (Appendix A, 1992b). This version differed from its predecessors in several significant respects:

- ♦ It gave specific support to the idea that each of the three public systems should engage in an ongoing and thorough long-range planning process -- a process that would offer guidance to policy makers as to the number of new institutions that might be needed over the course of a five- to ten-year planning window;
- ♦ It stated specific policy assumptions that would guide the Commission's reviews, such as the assumption that "The University of California plans and develops its campuses . . . on the basis of statewide need";
- ♦ It offered specific definitions of the terms "University Campus" and "Educational Center"; and
- ♦ It instituted a two-stage process of review that includes a preliminary "Letter of Intent" stage that permits the Commission to recommend against a proposal at an early stage before planning and commitments have extended so far that it is virtually impossible to slow down or stop a poor proposal. The second stage includes a "Needs Study" that contains more extensive information, as explained in Part Four of this report.

These changes responded to two previous Commission reports, *Higher Education at the Crossroads* (1990) and *A Framework for Statewide Facilities Planning* (1992a). Both of these reports recommended stronger planning efforts by both the public systems and the Commission. Implementation of this recommendation has not been entirely successful, as only the Board of Governors of the California Community Colleges responded specifically to the Commission's call for a long-range plan that identifies the number and location of new campuses and centers. Nevertheless, both the California State University and the University of California have, from time to time, re-examined their priorities, developed long-range enrollment projections, and submitted five-year capital outlay projections.

In the University of California's case, the Board of Regents, in the late 1980s, directed the nine campuses to re-evaluate their long-range development plans (LRDP's) with the purpose of identifying growth and resource needs through the year 2005. This directive occurred at a time when the University believed that it would need to build as many as three new campuses to serve anticipated enrollments, but that ambitious agenda foundered in the early 1990s when California fell into its most severe recession in decades.

Because these and other plans were largely swept away by economic and fiscal reversals, most of the long-range planning agendas that had been anticipated some years ear-

lier never reached fruition. As California began to emerge from the recession, however, it became apparent that the earlier forecasts for strong growth might well still come true, although delayed to some extent by the scarcity of resources. Accordingly, the Commission determined that it could best function in a new and term-limited legislative environment by identifying the major challenges facing higher education in the coming ten years, and by analyzing enrollment growth and resource constraints in a more comprehensive manner than in the past. That consciousness led to two reports, *The Challenge of the Century* (1995a) and *A Capacity for Growth* (1995b), in which the Commission presented both the Legislature and the higher education community with a broad estimate of both future needs and the State's ability to meet them. Those reports, which are both currently in the process of being revised, established planning forecasts that have proven to be remarkably accurate in terms of enrollment demand, economic growth, and resource needs. They form a major backdrop to the consideration of the proposal to establish a new institution in Merced that, if approved and funded, will become the University of California's tenth campus.

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**Contents of this  
report**

This report reviews a proposal by the University of California to build a new campus, its tenth, in Merced County in the San Joaquin Valley. At present, the University plans to open that campus with its first freshman class, and a total enrollment of 1,000 Full-Time-Equivalent Students (FTES), in the fall of 2005. Over the subsequent five years, enrollment is expected to grow to 5,000 FTES, with the graduate division accounting for about 10 percent of total enrollment. By the year 2014-15, the University anticipates that enrollment will have grown to 7,310, including 1,023 graduate students, or 14 percent of the total.

These numbers, and others, are discussed more extensively in Part Four of this report. Three maps of the area, which give the proposed campus location in different geographic scales, are included in this section as Displays 1, 2, and 3:

- ♦ Display 1 shows the precise position of the proposed campus on the next page;
- ♦ Display 2, on page 13, presents the configuration of the 2,000 acres upon which the University proposes to build the campus (the total "footprint" is 2,550 acres, from which 2,000 acres will be chosen); and,
- ♦ Display 3, on page 14, delineates the "footprint" for the campus within the larger Virginia Smith and Cyril Smith Trust properties that will eventually become a fully developed 10,300-acre area.

This report also represents the first time that either the Coordinating Council or the Commission has ever reviewed a proposal for a new University of California campus. Because of that precedent, the Commission believes that an overview of the extensive history of the proposal, including the processes that led to submission of the University's Letter of Intent and Needs Study, will be beneficial. That history and process review are contained in Part Three of this report -- a section that constitutes a departure from previous Commission reviews of new campuses and educational centers.

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*DISPLAY 1 Central Valley Regional Map, with the University of California at Merced Site and Other University of California and California State University Campuses*

The planning history of the proposed University of California at Merced campus is discussed first, beginning with its origins in the late 1980s as part of a package of three campuses presented to the Regents by President David P. Gardner. The next section includes a discussion of the major issues surrounding the proposal, its location within the University's statewide growth context, including systemwide enrollment projections, and physical capacity. The purpose of this section is to provide sufficient information for policy makers to reach conclusions about the necessity of building the new campus.

Part Four of this report is a traditional feature of Commission reviews, and reviews each of the ten criteria contained in the Commission's *Guidelines*. These criteria address such issues as enrollment projections (including a formal projection approved by the Demographic Research Unit of the Department of Finance -- Appendix B), the ques-

tion of viable alternatives, academic planning, environmental issues, effects on other institutions, economic efficiency, and other matters. Taken collectively, the criteria represent not only a comprehensive description of the proposal, but a series of questions that the proposing institution, in this case the University of California, should answer convincingly. It is not necessary that the proposal meet some stringent standard applied to every criterion, but it is necessary that the proposal, taken as a whole and in context, satisfy a standard of reasonableness sufficient to encourage policy makers, such as the Governor and the Legislature, to allocate resources sufficient to make it a reality.

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*DISPLAY3    Cyril Smith and Virginia Smith Trust Properties, with Proposed 2000 Acre Site for the  
Proposed University of California at Merced Campus*

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# 3

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## An Overview of the Major Issues

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This portion of the Commission's review of the proposed University of California at Merced campus will focus on two subjects:

- ♦ a chronology of events that led to the current review; and,
- ♦ a statewide analysis of projected enrollments and institutional capacity over the next ten years.

More specific enrollment questions are discussed in Part Four, particularly whether the Central Valley can generate sufficient enrollments to make this proposed campus a viable institution.

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### **A brief history of the proposal for the University of California at Merced**

The Board of Regents of the University of California has been contemplating the possibility of additional campuses since at least 1988. In that year, President David P. Gardner recommended the creation of three new campuses, one in northern California, one in the south, and a third in the San Joaquin Valley. The recommendation emerged from an internal analysis in the Office of the President that forecast strong enrollment growth and the probability that the existing eight general campuses would all reach their designed capacities (LRDP limits) within a 10 to 15 year period. Such a conclusion left only a few options:

- ♦ abandon the Master Plan and its commitment to draw its freshman student body from the top 12.5 percent of the high school graduating class, and the Regental policy of admitting all eligible applicants;
- ♦ raise the enrollment capacities of the existing general campuses; or,
- ♦ build new campuses.

The first option was never seriously considered. The second option was rejected on the primary grounds that California did not wish to replicate the mega-universities of the Midwest, such as the University of Illinois (36,000 students), or Ohio State (50,000 students). Additionally, local size constraints or environmental concerns would have prohibited substantial growth on at least some campuses. The third option, then, of building new campuses was the only viable possibility.

As noted above, the University also undertook to revise the LRDP's for each of its campuses. These major efforts required an examination of development patterns, building needs, enrollment capacity, and a complete environmental impact review.

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### *Selection of the San Joaquin Valley as the location for a tenth campus*

In March of 1989, President Gardner appointed a Site Selection Task Force that included two Regents, two Chancellors, the chair of the statewide Academic Council, an alumni representative, and three vice-presidents. That group's objective was to identify as many as 50 to 60 sites statewide that should be considered as locations for new



campuses. This larger number would eventually be narrowed to a final list of eight candidates from which three new campus sites would be chosen in 1991 (UC, 1989). Subsequently, other sites were considered that brought the total to between 85 and 100 that received at best a superficial examination.

In February of 1990, the Regents decided to focus on a single region, and directed the selection group to concentrate its efforts on the San Joaquin Valley. The primary reason for this emphasis was the fact that the Central Valley had the lowest first-time freshman participation rate of any area of the State and it was the only major area without a University of California campus.

At the same time, the Office of the President selected a group of “faculty advisors” representing each of the nine existing campuses in the system, and a broad range of disciplines. These individuals were charged with the responsibility of developing a broad outline of an academic plan for the new campus as well as preliminary capital and operating budgets. At the time, it was estimated that the new campus would open its doors in the fall of 1997 or 1998. Moreover, President Gardner continued to emphasize the need for two additional campuses before 2005 (UC 1990a).

In July 1990, the search narrowed to an examination of 20 sites that were to undergo a more detailed analysis by consultants. This examination considered such factors as transportation access, demographics, housing availability, geotechnical considerations, noise, water, utilities, public support, local growth policies, and esthetic appeal. These 20 locations were then culled to 8 preferred sites before being presented to the Board of Regents. A few months later, the Regents visited all eight sites and also held public meetings in Modesto and Fresno to receive public comment about site selection (Assembly, 1997).

At about this time, when the final 1990-91 State Budget was being prepared, the first clouds of the coming recession were noticed. As the University noted in one of its Updates on tenth campus planning:

*State budget trouble could affect campus planning*

The state budget uncertainties in Sacramento have left the University of California with planning uncertainties of its own, not the least of which is the schedule for identification and development of a new campus. UC President David P. Gardner, in announcing potential campus sites in the central region of the state, said that proceeding with the planning schedule will await the outcome of the 1990-91 budget currently under discussion in Sacramento (UC 1990b).

For the remainder of 1990, the University held a series of well-attended forums in the San Joaquin Valley area to solicit opinions and comments about the eight finalist sites. An announcement of the three finalists was scheduled for November, but budget driven delays began to emerge. The decision was re-scheduled for the spring of 1991.

In March of 1991, the Task Force, supported by President Gardner, offered three recommendations to the Regents: the Academy site in Fresno County; Table Mountain in Madera County; and, Lake Yosemite in Merced County. President Gardner also out-

lined a plan for the next steps in the selection process which included “analytical work on the three final sites, and [to] continue discussions with landowners and with community and government leaders.” He also expected to commence the Environmental Impact Report process in 1992, to open the new campus “between 1998 and 2000” -- the latter year appearing to be more likely -- and to commence consideration of an eleventh campus in 1992 (UC, 1991a).

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*Impact of the  
recession*

In late 1991, it became apparent that the University’s time schedule would have to be suspended, as the strong negative impact of the recession began to be felt. For the University, it posed a dilemma that President Gardner characterized in the following manner:

Quite simply, we are confronting a dilemma. On the one hand, the sufficiency of the state’s resources in the future is in real question, while on the other hand demand for enrollment in the University under the Master Plan continues to increase (UC, 1991b).

All signs pointed to the fact that the recession would probably involve a severe economic correction and cause the University to suspend its planning schedule. At the same time, the University was determined to maintain as much momentum as possible, and accordingly, pursued various option agreements with property owners whereby any of the three finalist sites could be held for at least five years to determine if funding would materialize.

For the next two years, the process of site evaluation continued, but at a much slower pace due to the shortage of resources. In May of 1993, the Board of Regents concluded that resource constraints made it fruitless to continue, and consequently voted to suspend the entire process until additional funds became available. That act prompted the Legislature to appropriate \$1.5 million in September (from a previously approved statewide bond issue) to the University to prepare environmental impact reports (EIR’s) for each of the three finalist sites.

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*Selecting the site of  
the tenth campus*

The EIR process began in December 1993, with the draft report released on October 3, 1994. Public hearings on that draft continued through November. As 1995 began, EIR hearings folded into further hearings to receive testimony from those who favored one or another of the three sites. That process was largely concluded by the middle of March. As the hearings ended, President Jack Peltason announced that the Regents would make a final decision on the site of the tenth campus on May 19, 1995.

On May 2, President Peltason completed his personal review of the prospective sites, and recommended to the Board of Regents that it select either Table Mountain in Madera County or Lake Yosemite in Merced County. He added that the Regents should receive a guarantee that at least 2,000 contiguous acres would be provided, and that the owners would agree to an option whereby the University could take possession of the land at little or no cost at any time over a 10-year period.

At its meeting on May 18 and 19, 1995, the Regents discussed the options at length and decided to secure the Lake Yosemite site in Merced. The Regents also certified the Final Environmental Impact Report at the same meeting. On July 1, 1996, an agreement was completed with the Merced County Board of Education, acting as Trustee for the Virginia Smith Trust, whereby the University would be able to exercise an option on 2,000 acres in the tract at any time prior to June 30, 2007 for a consideration of \$10,000.

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*Planning the  
proposed new  
campus*

In January 1996, newly appointed University President Richard C. Atkinson named Law Professor Daniel Simmons of the Davis campus to the position of Associate Provost in the Office of the President with the responsibility of developing a first draft of the academic plan for the proposed new campus. In doing so, the University acknowledged -- as explained more extensively in Part Four of this report -- that the academic plan to actually guide the new campus could not be created until those who would have the responsibility for implementing it were in place, including a Chancellor, an Academic Vice-Chancellor, and a founding faculty, at a minimum. Nevertheless, Mr. Simmons' advisory committee recommended a framework and vision that should guide further thinking about the academic direction of the campus. This vision included the extensive use of technology in both research and teaching, and the notion that the campus would serve as a hub, or nerve center, for numerous educational services extending from Stockton to Bakersfield.

In January of 1997, President Atkinson appointed Carol Tomlinson-Keasey to the position of Vice Provost for Academic Initiatives and Senior Associate to the President for the UC Merced. In those dual capacities, she is responsible for overall coordination and planning for the development of this campus. Currently, she supervises a staff of about a dozen professionals who are guiding various aspects of campus development.

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*Notification to the  
Commission*

On April 10, 1997, President Atkinson initiated the first step in the Commission's review of the proposed campus by forwarding the "Letter of Intent" to Executive Director Warren H. Fox. That letter noted that, in spite of the actions of the Board of Regents in naming Lake Yosemite as the site for the tenth campus:

... a final commitment to build the tenth campus depends on adequate resources both to develop the new campus and to ensure the continued growth and health of the University's nine campuses. Because the funding issue remains to be resolved, the University cannot yet provide you with a resolution from the Regents authorizing the new campus, although we have enclosed their resolution approving the preferred site (UC, 1997a).

An exchange of correspondence ensued between the two agencies that culminated in the submission of a formal "Needs Study" on November 1, 1998; several supplemental submissions were received by the Commission as recently as March 1999.

Since one of the requirements for a complete Letter of Intent is a resolution from the governing board, the Commission noted on May 27, 1997 that a formal resolution by the Regents authorizing the campus had not yet been approved. As a result, the Board of Regents considered the matter of authorization of the proposed campus through a series of progress reports from its staff during that summer that culminated in a September 1997 Board resolution that read as follows:

To enable the University to (1) maintain overall undergraduate access at the levels contemplated in the California Master Plan for Higher Education, and (2) fulfill its teaching, research, and public service mission in the San Joaquin Valley, the Regents authorize continued planning for and development of a tenth campus of the University of California at the previously approved Lake Yosemite site in Merced County. This authorization recognizes the need to continue academic program planning in coordination with planning of the physical site and the adjacent campus community. In addition, this authorization will enable the University of California to proceed with the formal steps of the statewide approval process. It is understood that exercise of the option agreement to acquire the campus site and commencement of construction at the site is contingent on further action by The Regents and on the provision of state resources adequate both to develop the new campus and to ensure the continued health and enrollment expansion of the University's existing campuses (UC, 1997b).

The most important resolution of the Regents, the actual exercise of the option to take possession of the property, has yet to occur. This Regental decision will probably take place only after the first capital outlay appropriation is approved by the Governor and the Legislature, probably in the summer of 2000 at the earliest. Nevertheless, the above resolution, together with supplemental materials contained in two other letters from President Atkinson to Executive Director Fox in October and November of 1997, completed the Letter of Intent process to the maximum extent possible, and led Dr. Fox to certify the completion of this step in the process that December (CPEC, 1997b).

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*Attending to the  
development of the  
academic plan*

Subsequent events focused strongly on the academic planning process. The University indicated from the outset that its most important objective was the creation of the academic plan. From this, all of the proposed new campus's architecture and administrative structure would inevitably emerge. It was to the end of developing that plan that the Simmons's committee was appointed, and to extending of that objective that President Atkinson appointed the Universitywide Academic Senate Task Force on the UC Merced on September 9, 1998. That Task Force, chaired by San Diego Oceanography Professor Fred Spiess, includes members from each of the nine campuses, with staff from the Office of the President acting in a consultative capacity. It has met several times and produced a first draft of a plan that is discussed in Part Four of this report.

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*Resources for planning the tenth campus*

The Legislature has been generous in providing planning funds for this campus. It appropriated \$9.9 million in the 1997-98 fiscal year, which Governor Wilson reduced to \$4.9 million; another \$9.9 million was earmarked for planning in 1998-99. Additionally, \$1.5 million was allocated for three “distributed learning centers” that include the Merced Tri-College Center, a partnership with the Stanislaus Agricultural Center in Modesto, and a third site to be determined in Bakersfield. Governor Gray Davis’s 1999-00 budget contains another \$9.9 million appropriation. The expenditure of these funds is discussed in greater detail in Part Four, and shown in Display 20. Likewise, these funds are included in slightly different form in Appendix C in connection with the University’s report to the Legislature on March 5, 1999.

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**Enrollment projections and institutional capacity: the University as a statewide institution**

The University of California has consistently been regarded by planners and policy makers as a statewide institution. This concept is evident in the Master Plan’s directive that the University draw its student body from the top eighth of the statewide high school graduating class, as well as by the policy that a student denied admission to his or her first choice of campus can be redirected to an alternative. These policies are unaltered by the recent change with respect to the top four percent of each high school’s graduating class being eligible now for the University. This statewide view formed the basis of President Gardner’s 1988 recommendation that three additional campuses would soon be needed, since the entire University, as a system, would soon reach its total planned capacity.

The policy of defining the University as a statewide system has been given official sanction by the Commission on several occasions, most recently in 1990 and 1992 in its *Crossroads* report and the *Guidelines* that govern this current analysis, respectively (CPEC, 1990 and 1992b). In the latter document, which outlines the policy assumptions that dictate the form of its review, the Commission stated: “The University of California plans and develops its campuses and off-campus centers on the basis of statewide need.” These statements, and their antecedents, are important in determining whether there is an identifiable need for a new University campus. If that need is not identifiable, then no regional considerations need be applied to the issue. To put this another way, regardless of the need for an University of California campus in the Central Valley -- perhaps based on the low participation rates of the residents of that region or even general scarcity of University services -- that area’s needs cannot be considered if there is no clearly demonstrable need for another campus on a statewide basis. That standard need not be applied to the California State University nor the California Community Colleges because regional and local needs have consistently formed powerful rationales for new institutions in those systems.

In the University of California’s case, the determination of need comes from the examination of two data sets, one of them relatively objective and readily obtainable -- enrollment projections -- and the other a matter of great complexity and some interpretation -- physical capacity. Each is discussed in the next two sections.

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*Enrollment  
projections*

In 1995, the Commission projected that University of California enrollments would grow by about one percent per year between fall 1993 and fall 2000. From fall 2000 to fall 2005, growth would accelerate to an average of 2.2 percent per year for that five-year interval. The Commission also forecast that, even with a relatively substantial building program, it was likely that the University would reach its systemwide physical capacity, given current Long-Range Development Plan (LRDP) limitations for the eight general campuses, by 2005 or shortly thereafter. Specifically, the Commission reached the following conclusion:

The Commission's analysis of capacity at the University of California indicates that continued growth on the eight general campuses will obviate the need for a ninth general campus (the Central Valley campus) through the final year of this projection, 2005-06. However, the capacity analysis does indicate that 1,900 students will remain unserved as of 2005-06 due to capacity restrictions, and while it is assumed that the University can accommodate a number that small through greater efficiencies or minor overenrollment throughout the system, it is likely that a new general campus will ultimately be required at an as yet undetermined date after 2005. Given the extraordinary lead times to develop such a campus -- at least five years from groundbreaking to occupancy -- plus additional time for planning and financing, enrollment growth at the University will need to be watched closely over the next five years in order to determine when the new campus should enroll its first class (CPEC, 1995b).

Currently, the Commission is revising its enrollment projections and will publish them for all three public systems of California higher education by next fall. In the interim, the latest annual projection of University enrollments from the Demographic Research Unit (DRU) of the Department of Finance is shown, together with the Commission's 1995 undergraduate projection, in Displays 4 and 5 below.

These two displays give a clear picture of the University's enrollment future, which is characterized by strong growth that crests in the later years of the first decade of the new millennium, perhaps around 2008, when total undergraduate enrollment is projected to increase by 3.3 percent. This growth is attributable to the arrival of Tidal Wave II -- the children of the Baby Boom generation.

After that time, the Demographic Research Unit continues to project growth, but there is a decline from the high in 2008 to an increase of less than one percent in 2012. Overall, demand for the University is expected to increase by 58,633 students between fall 1998 and fall 2010, including 5,053 graduate students. The total increase is approximately equal to building two additional campuses the size of Berkeley or UCLA.

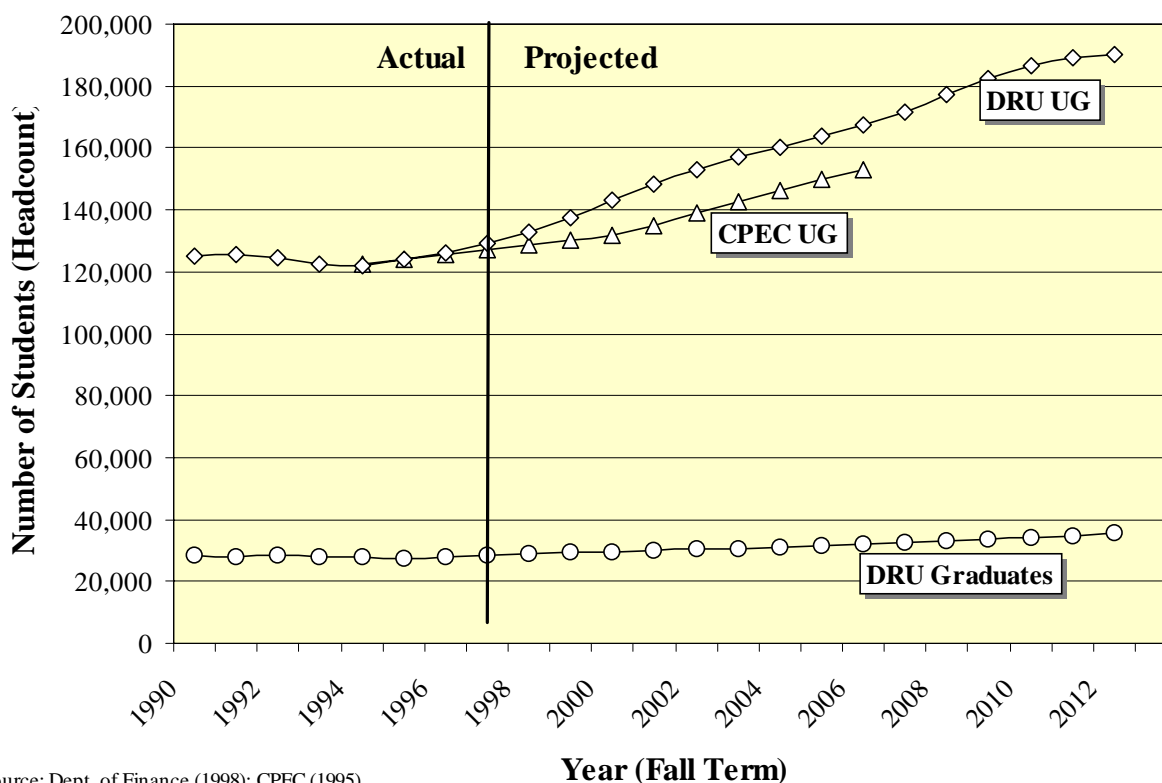
The projected demand in undergraduate students is much greater than for graduate students because, in part, undergraduate enrollment is largely driven by demographics, and in part because graduate enrollment is relatively easy to manage through the admissions process. Under the Master Plan and Regental policy, the University is obligated to accept all eligible applicants from the top eighth of the state's high school graduating class, but there is no similar policy with respect to graduate students. Each graduate division

**DISPLAY 4** *University of California Headcount Enrollments, 1990 to 1997 (Actual) and 1998 to 2012 (Projected)*

Year	Historical Enrollments						CPEC 1995 Undergraduate Projection
	Undergraduate		Graduate		Total		
	Enrollment	% Incr.	Enrollment	% Incr.	Enrollment	% Incr.	
1990	125,044		28,564		153,608		
1991	125,417	0.3%	28,039	-1.8%	153,456	-0.1%	
1992	124,789	-0.5%	28,212	0.6%	153,001	-0.3%	
1993	122,657	-1.7%	27,657	-2.0%	150,314	-1.8%	
1994	121,940	-0.6%	27,793	0.5%	149,733	-0.4%	122,272
1995	123,948	1.6%	27,208	-2.1%	151,156	1.0%	123,873
1996	126,260	1.9%	27,867	2.4%	154,127	2.0%	125,404
1997	128,976	2.2%	28,527	2.4%	157,503	2.2%	126,936
							128,468
Projected	Department of Finance Projection						
	Undergraduate		Graduate		Total		
1998	132,736	2.9%	29,008	1.7%	161,744	2.7%	130,004
1999	137,546	3.6%	29,417	1.4%	166,963	3.2%	131,551
2000	142,972	3.9%	29,675	0.9%	172,647	3.4%	135,068
2001	148,455	3.8%	29,963	1.0%	178,418	3.3%	138,890
2002	152,970	3.0%	30,323	1.2%	183,293	2.7%	142,578
2003	156,973	2.6%	30,638	1.0%	187,611	2.4%	146,145
2004	160,416	2.2%	30,990	1.1%	191,406	2.0%	149,771
2005	163,703	2.0%	31,368	1.2%	195,071	1.9%	152,930
2006	167,603	2.4%	31,829	1.5%	199,432	2.2%	
2007	171,749	2.5%	32,310	1.5%	204,059	2.3%	
2008	177,451	3.3%	32,858	1.7%	210,309	3.1%	
2009	182,286	2.7%	33,449	1.8%	215,735	2.6%	
2010	186,316	2.2%	34,061	1.8%	220,377	2.2%	
2011	189,305	1.6%	34,800	2.2%	224,105	1.7%	
2012	189,941	0.3%	35,625	2.4%	225,566	0.7%	

Source: Department of Finance, Demographic Research Unit Special Projection;  
*A Capacity for Growth (CPEC, 1995b)*

DISPLAY 5 Actual and Projected University of California Enrollments, 1990 to 2012



Source: Dept. of Finance (1998); CPEC (1995)

can admit as many students as resources and perceptions of their quality permit. Thus, in the current Demographic Research Unit projections, the 12-year estimate for undergraduates shows a 40.4 percent increase, while the graduate division increases by only 17.4 percent. This relationship could change if the University is successful in increasing the number of graduate students, as it has consistently stated is its intention. Should its intention become reality, the increase projected for graduate students and, consequently, the increase in total enrollment could be even higher than currently projected.

#### Physical capacity

In its 1995 report, *A Capacity for Growth*, the Commission estimated that the University's physical capacity numbered just over 154,000 FTE students. This estimate was derived from a detailed analysis of existing space and utilization standards that have been used for many years to determine institutional capacity. Unfortunately, those standards, which were created mostly in the 1950s and 1960s, are now so antiquated that it is difficult to rely on them as the sole standard of institutional ability to enroll students. The standards are based on an assumption that has become less and less reliable in the Information Age, that total institutional capacity can be measured solely by activity in classrooms and teaching laboratories. In 1995, the Commission reported that classrooms only accounted for 2.9 percent of the University of California's total space on its eight general campuses, with teaching laboratories adding another 5.2 percent (8.1 per-



cent total). Today, computers, the internet, teleconferencing, and other electronic means of delivering instruction, together with an increase in the instructional use of research laboratories, have rendered the traditional space standards less accurate as a measuring device, and accordingly, less useful. Nevertheless, the Commission continues to recognize these standards, even though they add considerable complexity to the question of physical resources and capacity.

The Commission responded to the capacity analysis problem in 1995 by suggesting that a distinction should be made between “technical capacity” and “real capacity.” The former refers to the formulaic result of applying the old space standards, with the latter adjusting that result to account for identifiable anomalies. The Commission’s estimate of the University’s real capacity in 1995, which varied from the figures derived from the space standards, resulted from adjusting the technical capacity numbers for both Berkeley and UCLA.

Display 6 shows the technical capacity for the University in 1997, with Display 7 indicating the real capacity. The difference is dramatic, as technical excess capacity in the system is reduced from 16,609 FTES to a real excess capacity total of only 3,583 FTES.

The distinction between these two measures of capacity is best illustrated by examining the situation at UCLA. According to the standards, UCLA has an excess enrollment capacity of 11,322 Full-Time-Equivalent Students (FTES) as indicated on Display 6. In fact, the Legislative Analyst recently suggested that the space surplus was sufficient for 11,796 additional FTES. If that were true, then UCLA should be able to grow to an enrollment of over 40,000 students without building any additional space. However, any large institution needs to be considered as an organic whole. There may be sufficient classroom and teaching laboratory space to add 10,000 additional students, but that decision would require the hiring of over 500 faculty for whom there would be insufficient offices, research laboratories, and administrative support. Proportional increases in student services, plant maintenance, and other University functions would need to occur as well. In the case of UCLA, the campus is landlocked in the heavily developed Westwood area of Los Angeles. The addition of such a large number of students would also violate the campus’s carefully developed LRDP limits and would probably involve numerous environmental issues. Indeed, the real estimate of UCLA’s capacity suggests that the campus could accommodate only an additional 2,264 students, as indicated on Display 7.

Display 8 presents one version of University of California systemwide capacity. If current physical capacity remains relatively static -- some additional capacity will be added over the next several years as a result of Proposition 1A -- at the same time that enrollment begins the stronger growth curve projected by both the Commission in 1995 and Demographic Research Unit in 1998, the University will need a substantial amount of additional space immediately. This display reflects the relatively small increases in capacity currently anticipated in the University’s five-year projection contained in the Space Tables (UC, 1999b).

**DISPLAY 6** *Analysis of University of California Enrollment Capacity Based Solely on Technical Results of 1970 and 1973 Legislative Space Standards*

Campus	WSCH <sup>1</sup>			WSCH <sup>1</sup>			<u>Total</u>	
	Technical Capacity <sup>3</sup>	WSCH <sup>1</sup> Load	WSCH <sup>1</sup> Capacity Exceeds Load	WSCH Capacity <sup>1,4</sup>	WSCH <sup>1</sup> Load	WSCH <sup>1</sup> Capacity Exceeds Load	WSCH <sup>1</sup> Capacity Exceeds Load	FTES <sup>2</sup> Capacity Exceeds Load <sup>5</sup>
Berkeley	414,736	350,001	64,735	53,700	48,325	5,376	70,110	5,010
Davis	220,968	246,879	-25,911	49,085	59,063	-9,978	-35,889	-2,540
Irvine	236,209	193,447	42,762	15,165	22,394	-7,229	35,534	2,694
Los Angeles	507,336	361,341	145,995	33,953	29,528	4,425	150,420	11,322
Riverside	141,488	106,739	34,749	17,969	17,836	133	34,883	2,683
San Diego	196,264	222,038	-25,774	25,476	20,904	4,572	-21,202	-1,501
Santa Barbara	213,397	222,752	-9,355	37,773	37,401	372	-8,982	-631
Santa Cruz	125,592	132,290	-6,698	20,550	20,011	539	-6,159	-428
<b>Totals</b>	2,055,992	1,835,487	220,505	253,671	255,462	-1,790	218,714	<b>16,609</b>

1. WSCH = Weekly Student Contact Hours.

2. ASF = Assignable Square Feet.

3. Capacity determined by using 1970 legislative standards of .43 ASF/WSCH + 10% for service space.

4. Capacity determined by using 1973 legislative standards that vary by type of laboratory.

5. WSCH divided by contact hours per headcount student on each campus to determine FTES.

Source: University of California: Actual Fall 1997 data from the Fall 1998 Space Inventory and Space Tables.

However, ways exist to expand this capacity considerably, if the University is committed to expanding enrollment as rapidly as resources permit. At present, the University's projection of the use of Proposition 1A funds does not appear to anticipate large capacity increases, which may be due to its current need for seismic retrofitting and the requirements of the Americans with Disabilities Act.

However, the University is exploring ways of expanding capacity in the short run by adopting some or all of the possibilities presented in Display 9. President Atkinson presented these possibilities to the Regents recently: off-campus education; more extensive use of summer sessions; expansion of instructional days, weeks, or years; rises in campus LRDP limits; and, the addition of the proposed campus at Merced.

On the other hand, if commitments change and the University and the State endeavor to expand capacity on those general campuses that have not yet reached their LRDP limits, then a large percentage of the anticipated enrollment surge can probably be ac-

**DISPLAY 7** *Analysis of University of California Enrollment Capacity Adjusted for Reduced Capacity at the Berkeley and Los Angeles Campuses*

Campus							<u>Total</u>	
	WSCH <sup>1</sup> Technical Capacity <sup>3</sup>	WSCH <sup>1</sup> Load	WSCH <sup>1</sup> Capacity Exceeds Load	WSCH <sup>1</sup> Capacity <sup>1,4</sup>	WSCH <sup>1</sup> Load	WSCH <sup>1</sup> Capacity Exceeds Load	WSCH <sup>1</sup> Capacity Exceeds Load	FTES <sup>2</sup> Capacity Exceeds Load <sup>5</sup>
Berkeley	414,736	350,001	64,735	53,700	48,325	5,376	70,110	1,002
Davis	220,968	246,879	-25,911	49,085	59,063	-9,978	-35,889	-2,540
Irvine	236,209	193,447	42,762	15,165	22,394	-7,229	35,534	2,694
Los Angeles	507,336	361,341	145,995	33,953	29,528	4,425	150,420	2,264
Riverside	141,488	106,739	34,749	17,969	17,836	133	34,883	2,683
San Diego	196,264	222,038	-25,774	25,476	20,904	4,572	-21,202	-1,501
Santa Barbara	213,397	222,752	-9,355	37,773	37,401	372	-8,982	-631
Santa Cruz	125,592	132,290	-6,698	20,550	20,011	539	-6,159	-428
<b>Totals</b>	2,055,992	1,835,487	220,505	253,671	255,462	-1,790	218,714	3,543

1. WSCH = Weekly Student Contact Hours.
2. ASF = Assignable Square Feet.
3. Capacity determined by using 1970 legislative standards of .43 ASF/WSCH + 10% for service space.
4. Capacity determined by using 1973 legislative standards that vary by type of laboratory.
5. WSCH divided by contact hours per headcount student on each campus to determine FTES.

Source: University of California: Actual Fall 1997 data from the Fall 1998 Space Inventory and Space Tables

commodated, at least through 2010. To consider this possibility, the Commission simulated the impact if the University were to begin a new commitment to growth by expanding each campus, other than Berkeley and Los Angeles, by 600 FTE students per year until various LRDP limits were reached. If begun now -- and always assuming that the necessary resources are provided -- the additional capacity could be in place around 2002-03.

Display 10 presents the results of the Commission's simulation to expand physical capacity. These adjustments have been incorporated into the "Current/Projected FTES Capacity" numbers shown in Display 10.

Additionally, the Commission assumes that the University will endeavor to implement at least the first three items in Display 9 as rapidly as possible. These three policy changes collectively could generate as much as 17,000 FTES in additional capacity. The first two possibilities -- increased use of off-campus centers and summer sessions -- are estimated by the University to generate 7,000 FTES. In Display 10, the Commission

**DISPLAY 8** *Projected Capacity and Enrollment at the University of California, 1997-98 to 2010-11*

Year	<u>Total Current Capacity</u>		<u>Total Projected Load</u>		<u>Excess Capacity</u>	
	Weekly Student Contact Hours <sup>1</sup>	Full-Time-Equivalent Students <sup>2</sup>	Weekly Student Contact Hours <sup>3</sup>	Full-Time-Equivalent Students <sup>4</sup>	WSCH	FTES
1997-98	2,133,239	155,069	2,090,400	151,486	42,839	3,583
1998-99	2,128,916	154,812	2,146,687	155,565	-17,771	-753
1999-00	2,141,970	155,717	2,215,954	160,585	-73,984	-4,868
2000-01	2,144,267	155,882	2,291,393	166,052	-147,126	-10,170
2001-02	2,140,667	155,602	2,367,986	171,602	-227,319	-16,000
2002-03	2,166,980	157,457	2,432,688	176,291	-265,708	-18,834
2003-04	2,200,779	159,878	2,489,997	180,444	-289,218	-20,566
2004-05	2,200,779	159,878	2,540,365	184,094	-339,586	-24,216
2005-06	2,200,779	159,878	2,589,007	187,619	-388,228	-27,741
2006-07	2,200,779	159,878	2,646,887	191,813	-446,108	-31,935
2007-08	2,200,779	159,878	2,708,297	196,264	-507,518	-36,385
2008-09	2,200,779	159,878	2,791,248	202,275	-590,469	-42,397
2009-10	2,200,779	159,878	2,863,262	207,494	-662,483	-47,615
2010-11	2,200,779	159,878	2,924,871	211,958	-724,092	-52,080

1. Weekly Student Contact Hour (WSCH) capacity derived from UC Space Analysis tables.
2. Weekly Student Contact Hours divided by the systemwide contact hours per FTE student (13.8).
3. Full-time-equivalent student multiplied by the systemwide contact hours per FTE student (13.8).
4. Demographic Research Unit headcount projection adjusted for the past five-year average difference between Fall headcount and annualized FTES.

Source: UC Space Analysis Tables; UC Fall 1997 utilization analysis; CPEC staff analysis.

assumes that those items will be implemented within the next five years, starting in 2000-01. The University offered no estimate for additional capacity generated by expanding the instructional day, week, and year, but the Commission believes 10,000 FTES can be used as a reasonable goal at least on an interim basis. That goal could be reached

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**DISPLAY 9** *Policy Changes Capable of Increasing Campus Capacity*

Possible Change	Increased Headcount Enrollment
A. Increased use of off-campus centers	5,000
B. Use summer sessions more intensively	2,000
C. Expand the instructional day, week, and year	10,000 <sup>2</sup>
D. Re-evaluate LRDP <sup>1</sup> limitations	11,000 <sup>3</sup>
E. UC Merced	5,000
<b>Total (Headcount)</b>	<b>33,000</b>
<b>Total (Full-Time Equivalent Students)</b>	<b>30,360<sup>4</sup></b>

1. Long-Range Development Plan
2. Preliminary CPEC Estimate; UC provided no estimate in this category
3. UC estimate was 10,000 to 12,000 headcount students
4. FTES derived by applying most recent ratio of UC headcount to FTES.

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Source: UC Regents Agenda, February 10, 1999, Item 303.

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over an eight-year period on the assumption that half of the total will be implemented within three years, with the remainder added at the rate of 1,000 FTES per year.

The policy change of re-evaluating the LRDP limits of those campuses that have not reached those limits should have little effect prior to 2006-07, even if the existing campuses adopt a strong growth posture beginning in 2002-03. In that year, and again assuming growth of 600 FTES per year where possible, Santa Barbara and Santa Cruz should reach their limits. Santa Barbara may expand further, but it seems unlikely that Santa Cruz will grow larger, given strong local opposition to expanding the size of the campus. Davis should reach its limit in 2008-09,

with none of the remaining campuses reaching their limits until after 2010-11. Accordingly, the Commission has assumed that Santa Barbara will continue to grow by 600 FTES for five additional years, with Davis growing for three additional years. These assumptions have all been incorporated into Display 10 to produce the “Revised Projected Excess FTES Capacity.”

Construction of a new campus at Merced has also been incorporated into the figures in Display 10. This campus is assumed to start with an enrollment of 1,000 FTES in 2005-06 and expand at a rate matching the Demographic Research Unit’s projection thereafter.

Most of these options will require capital resources that are not currently available or identified, but Display 10 does suggest that program extensions and more effective facilities utilization can potentially increase the capacity of the existing campuses by a substantial amount, possibly by the equivalent of another large campus. At the same time, options that produce the most additional capacity, including expanding the existing campuses, raising the LRDP limits, using off-campus centers, building a new campus at

*DISPLAY 10 Projected Capacity and Enrollment at the University of California, with Normal Growth to LRDP Limits, Plus Additional Capacity (per Display 9), 2000-01 to 2010-11*

Year	Current/ Projected FTES Capacity	Current/ Projected FTES Load	Current/ Projected Excess FTES Capacity	Potential Additional FTES Capacity (Display 9)	Revised Projected Excess FTES Capacity
1997-98	155,069	151,486	3,583	0	3,583
1998-99	154,812	155,565	-753	0	-753
1999-00	155,717	160,585	-4,868	0	-4,868
2000-01	155,882	166,052	-10,170	3,400	-6,770
2001-02	155,602	171,602	-16,000	6,800	-9,200
2002-03	161,057	176,291	-15,234	9,200	-6,034
2003-04	167,078	180,444	-13,366	11,600	-1,766
2004-05	169,323	184,094	-14,771	14,000	-771
2005-06	172,923	187,619	-14,696	16,000	1,304
2006-07	176,501	191,813	-15,312	17,683	2,371
2007-08	179,501	196,264	-16,763	19,430	2,667
2008-09	182,501	202,275	-19,774	20,177	403
2009-10	185,501	207,494	-21,993	20,924	-1,069
2010-11	188,501	211,958	-23,457	21,671	-1,786

1. Weekly Student Contact Hour (WSCH) capacity derived from UC Space Analysis tables.
2. Weekly Student Contact Hours divided by the systemwide contact hours per FTE student (13.8).
3. Full-time-equivalent student multiplied by the systemwide contact hours per FTE student (13.8).
4. Demographic Research Unit headcount projection adjusted for the past five-year average difference between Fall headcount and annualized FTES.

Source: UC 1999 Space Analysis Tables; UC Fall 1997 utilization analysis; CPEC staff analysis.

Merced, and probably expanding summer sessions will all require both time and considerable resources. In the case of UC Merced, the 5,000 student addition will not be complete, under current plans, until 2010.

A close examination of Display 10 suggests that the University can approach a resolution of its current capacity deficiencies, but only if a great many possibilities, many unproven, are implemented, and if considerable resources are provided. Under the most optimistic scenario, as many as 21,671 additional FTES can be generated by 2010-11 -- including the 5,000 FTES projected for UC Merced, plus the other FTES that might be generated by raising current LRDP limitations. Even with all of these actions, how-

ever, the University will almost certainly experience a net space deficit almost immediately that will crest under the Commission's Display 10 scenario in 2001-02. Over the succeeding four years, as actions are implemented to increase capacity, the space deficit should decrease, and then be eliminated in 2005-06. After that, continued strong growth will push the University into another space deficit in 2009-10 even with the Merced campus and some of the other campuses growing rapidly. This projection only extends to 2010-11, but it appears that, even with Merced, the University will face considerable challenges to enroll all of the residents of California who will be qualified to attend. Such a set of circumstances suggests that the University may have been correct when it considered more than one additional campus in 1988.

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# 4

## A Review of the Commission's Criteria

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**Introduction** As noted in Part Two of this report, the Commission is mandated by the Legislature to provide its counsel on “the need for and location of new institutions and campuses of public higher education.” That role and responsibility has been discharged by the Commission, and by the Coordinating Council before it, for almost 40 years, yet in all that time, neither the Council nor the Commission has ever reviewed a proposal from the University of California for a new campus or an off-campus center. Accordingly, the current process of reviewing UC Merced is unfamiliar to both the Commission and the University, and must necessarily set precedents for the way in which new University campuses will be reviewed in the future.

In fulfilling its charge under various Education Code sections, the Commission intends to provide policymakers with as much information as possible. Although the Commission is obligated under Section 66904 to offer a recommendation on any new campus or center proposal it receives -- and has done so in the current instance -- it believes that the most important element of the current report is the data and information it contains. Ultimately, any final decision on the UC Merced proposal must lie in the hands of the Governor and the Legislature, for it is only from those two branches of government that the necessary resources to build the campus can flow.

With the above in mind, this analysis of UC Merced turns to the Commission's ten criteria for reviewing new campus proposals, which have been arrayed into the seven categories shown below:

- ♦ Enrollment projections;
- ♦ Consideration of alternatives and environmental impact;
- ♦ Academic planning and program justification;
- ♦ Geographic and physical accessibility;
- ♦ Serving the disadvantaged;
- ♦ Effects on other institutions; and
- ♦ Consideration of needed funding and economic efficiency.

Of these, it is possible to render a relatively complete evaluation of all but academic planning and economic efficiency. As to the academic plan, there is no comprehensive plan in existence, nor can there be until a chancellor and a founding faculty are in place. At the same time, the Commission has asked the University to state, as clearly as possible, its vision for the new campus, and this the University has done, as reviewed in the academic planning section below.



With regard to economic and fiscal efficiency, it is important to understand that multi-year cost data for new campuses are inevitably projections, not budget requests. As the Commission noted some years ago, there are large differences between year-to-year budgetary reviews and long-range planning exercises (CPEC, 1995b). Long-range planning inevitably involves a process that defines the parameters of a number of possible futures. Budgetary reviews are designed to determine exact expenditure levels for clearly identified functions and purposes. Long-range planning is a way to think creatively about the future; budget planning specifies that future more exactly. Long-range planning is a way to organize data and information into useful forms; budget planning does the same, but with far greater definition. In short, long-range planning is a process that leads to several possible outcomes; budget planning is a process that leads to a single design from which variance is discouraged. In this sense, the University's Needs Study should be regarded as a planning document, not a budget document, and should be both read and understood in that context. This is particularly important when reviewing the budgeting numbers in Display 20, and the capital outlay analysis in the final section of this report. The budget numbers presented are not requests for funds, but estimates of the cost of one possible future. It is a certainty that they will change as more data become available, and the estimates and projections are refined further. With those considerations in mind, the Commission's assessment of the UC Merced proposal is as follows:

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**Enrollment  
projections**

*1.1 Enrollment projections must be sufficient to justify the establishment of the "new institution," as that term is defined above. For a proposed new college or university campus, enrollment projections for each of the first ten years of operation (from the college's or campus's opening date) must be provided.*

*As the designated demographic agency for the State, the Demographic Research Unit has the statutory responsibility for preparing systemwide and district enrollment projections. For a proposed new institution, the Unit will approve all projections of undergraduate enrollment developed by a systemwide central office of one of the public systems or by the community college district proposing the new institution.*

*1.2 For a new University of California campus, statewide enrollment projected for the University should exceed the planned enrollment capacity of existing University campuses . . .*

As noted, Part Three of this report strongly suggests that the University needs additional capacity now, as well as in the future. Displays 8 and 10 both show that, given the most recent enrollment projections from the Demographic Research Unit (DRU), the University needs to expand its ability to serve additional students. Even with various measures to increase capacity, including raising Long-Range Development Plan (LRDP) limits, extending summer instruction, using off-campus centers, and building the Merced campus, there will still be space deficiencies for many years to come, as shown in Display 10

on page 29. Accordingly, there should be little question that Criterion 1.2 above has been satisfied.

The requirement for a DRU approved enrollment projection was met on December 9, 1998 by letter to Dr. Carol Tomlinson-Keasey (Appendix B); it showed the projection contained in Display 11 below.

*DISPLAY 11 Demographic Research Unit Approved Undergraduate Enrollment Projection, UC Merced Campus, 2005 to 2014*

<b>Year (Fall Term)</b>	<b>Undergraduate Enrollment</b>	<b>Year (Fall Term)</b>	<b>Undergraduate Enrollment</b>
<b>2005</b>	936	<b>2010</b>	4,671
<b>2006</b>	1,683	<b>2011</b>	5,091
<b>2007</b>	2,430	<b>2012</b>	5,500
<b>2008</b>	3,177	<b>2013</b>	5,899
<b>2009</b>	3,924	<b>2014</b>	6,287

Source: Demographic Research Unit, Department of Finance, December 9, 1998.

The University's enrollment projection, the undergraduate portion of which DRU approved, delineates several components, which are shown in Display 12 below.

In creating this projection, the University relied on both the current demographics of the San Joaquin Valley, and its previous experience in creating the Irvine, San Diego, and Santa Cruz campuses in the 1960s. Each of those institutions grew rapidly for the first ten years of its existence

-- Santa Cruz grew somewhat slower than the other two -- and each began with a graduate division.

In spite of these superficial similarities, however, there can be no exact parallel to the UC Merced proposal. To illustrate, Irvine and San Diego began with heavily populated areas nearby, while Merced is rural and mostly surrounded by small towns and farming communities. Like Merced, Santa Cruz is more isolated, but its coastal setting nevertheless makes it highly attractive to people from outside of the immediate area. Also, Santa Cruz was conceived primarily as an undergraduate institution -- the "Oxford of the West" -- and consequently had a graduate division that grew very slowly. Merced plans to begin with 10 percent graduate students, and grow to 14 percent by the tenth year. Santa Cruz had less than half that percentage after ten years. The historical growth patterns of the three campuses are shown in Display 13.

In considering how UC Merced will draw students, at least three factors are critical. The first is freshman participation; how will Merced draw students to the new campus? The second is transfer students; will the new campus create the productive relationships with community colleges necessary for a strong transfer rate? The third is graduate students: will the new campus create the programs and facilities necessary to attract those interested in advanced study? Each of these elements is discussed below.

**DISPLAY 12** *Proposed Enrollment for UC Merced, by Level of Instruction, 2005-06 to 2014-15*  
(Year-Average Headcount)

Student Category	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15
<i>Undergraduate</i>	936	1,683	2,430	3,177	3,924	4,671	5,091	5,500	5,899	6,287
New Freshmen	655	680	871	1,035	1,176	1,379	1,258	1,368	1,405	1,520
Transfers	281	291	373	443	504	591	539	586	602	652
Other	0	712	1,186	1,699	2,244	2,701	3,294	3,546	3,892	4,115
<i>Graduate</i>	104	187	270	353	436	519	629	750	881	1,023
Graduate Percent	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	11.0%	12.0%	13.0%	14.0%
<i>Annual Growth</i>	N/A	830	830	830	830	830	530	530	530	530
Undergraduate	N/A	747	747	747	747	747	420	409	399	388
Graduate	N/A	83	83	83	83	83	110	121	131	142
<b>Total Enrollment</b>	1,040	1,870	2,700	3,530	4,360	5,190	5,720	6,250	6,780	7,310

Source: University of California, 1998, p. 21.

**DISPLAY 13** *Ten-Year Enrollment History of the University of California's Three Newest Campuses, 1965 to 1974 Headcount*

Year	<u>Irvine</u>			<u>San Diego</u>			<u>Santa Cruz</u>		
	Enroll- ment	Percent Increase	Graduate Students	Enroll- ment	Percent Increase	Graduate Students <sup>1</sup>	Enroll- ment	Percent Increase	Graduate Students
1965	1,589	N/A	8.8%	869	N/A	39.6%	652	N/A	0.0%
1966	2,385	796	13.4%	1,470	601	34.9%	1,267	615	2.1%
1967	2,862	477	16.1%	2,107	637	29.0%	1,922	655	3.1%
1968	3,548	686	16.6%	2,660	553	27.4%	2,539	617	3.8%
1969	4,474	926	18.2%	3,474	814	24.8%	3,007	468	4.9%
1970	5,787	1,313	12.7%	4,310	836	21.6%	3,495	488	7.3%
1971	6,255	468	14.4%	4,903	593	18.6%	4,084	589	7.1%
1972	6,720	465	13.5%	5,348	445	18.3%	4,508	424	6.0%
1973	7,692	972	13.7%	6,190	842	15.0%	4,783	275	5.8%
1974	8,038	346	14.3%	6,880	690	15.0%	5,250	467	5.8%

1. San Diego's percentage of graduate students was high initially due to the long-established Scripps Institution of Oceanography becoming part of the new campus in 1965.

Source: University of California, 1998, p. 23.

*First-time freshmen* In Fall 1997, the University's eight general campuses enrolled 6.8 percent of the graduates of public high schools in the State, but less than half of that (3.3 percent) in the Central Valley, a rate the University does not anticipate will change in the future (UC, 1998a, p. 27). As Display 14 shows, the University is projecting that, even with the presence of UC Merced, participation of Valley high school graduates to the existing campuses will not diminish, which means that all of the freshman enrollment at UC Merced will have to come from an increase in the Central Valley's participation rate.

**DISPLAY 14** *Percentage of Public High School Graduates Attending University of California Campuses, 1992-93 to 1996-97*

County	1992-93	1993-94	1994-95	1995-96	1996-97
Fresno	3.6%	3.5%	3.3%	4.0%	3.8%
Kern	1.8%	1.7%	2.0%	2.0%	2.6%
Kings	2.0%	2.0%	2.2%	2.4%	2.7%
Madera	2.3%	2.2%	3.1%	1.3%	2.6%
Merced	2.5%	2.3%	3.2%	2.6%	4.0%
San Joaquin	3.7%	3.7%	3.4%	3.7%	3.7%
Stanislaus	3.2%	3.0%	2.9%	2.9%	3.8%
Tulare	3.0%	3.0%	3.3%	3.2%	2.8%
<b>Eight-County Region</b>	2.9%	2.8%	2.9%	3.0%	3.3%
<b>Statewide Average (Fall 1997)</b>	<b>6.78%</b>				

Source: University of California, 1998, p. 27.

It has long been an axiom of higher education enrollments that “proximity is destiny,” which is to say that the presence of a campus automatically increases the participation rates of the residents near that campus. Clearly, the University is anticipating that the principle will hold with UC Merced, and there is ample reason to believe that their assumption will be correct. Further, UC's assumptions about increases in the participation rate appear to be reasonable, if not modest. The Office of the President assumes a range of participation rates between 0.8 and 1.5 percent above the existing rate, with the students produced by the increase attending the new campus. In other words, where about 3.3 percent of public high school graduates in the Central Valley attend the University now, the projection anticipates that only 0.8 to 1.5 percent of the region's high school graduates will attend UC Merced in its first ten years of existence.

The Commission views this number as conservative on two counts: first, because of the assumption that there will be no erosion in the participation rate from the Valley to other University of California campuses; and second, because of the low participation rate assumption for new students. It seems more reasonable to assume a modest erosion in the 3.3 percent participation rate to existing campuses, perhaps to the 2.5 to 3.0 percent range, and a higher rate for other students caused by the University's intensive efforts, already under way, to promote the new campus among the Valley's residents. Rather than UC's estimate of only 500 to 600 freshman students from the eight-county Central Valley region attending the Merced campus by 2010, it seems more likely that the actual number could be twice as high.

Only time will tell if UC's projected participation rates are accurate. For the purposes of this analysis, the Commission has taken UC's estimated participation rates and applied them to the most recent projection of public high school graduates produced by the Demographic Research Unit. The result, shown in Display 15, produces about 50 percent of the total projected enrollment for UC Merced, with the remaining students coming from outside of the eight-county area; that out-of-area enrollment increases further to 58 percent by 2010, and then to 62.4 percent in the final year of the projection, 2014-15.

In its Needs Study, the University offers very little to support these projections, but there are several reasons to suspect that the estimate is plausible. The first stems from Merced's relative proximity to the Bay Area, and the fact that the Berkeley campus is now, and will surely remain, impacted. Currently, students redirected from that campus may choose Santa Cruz or Davis, but many may choose Merced, particularly residents from the counties closest to the Central Valley, including Alameda and Contra Costa, as well as Santa Clara, and even Sacramento, Solano, and Sonoma. There is also a pool of students that attend the University from private high schools, from other states, and from foreign countries. While not a large number, it also will contribute to the non-public high school total. Enrollments from outside the region may also accelerate if UC Merced implements an academic plan with strong science, computer science, and engineering components, which seems likely. These are high-demand disciplines that could attract many students, not only from the Valley, but elsewhere.

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*Transfer students*    The next element in the enrollment equation is community college transfers. In this category, the University projects:

. . . that 30 percent of new undergraduate students will be transfer students and that 90 percent of them will come from the twelve California Community Colleges (CCC's) in the region. Projections range from a first year cohort of 281 to 652 in 2014-15. Currently, 400 students transfer to UC from the 12 CCC's located in the UC Merced region. This averages about 33 students per community college each year (UC, 1998a, p. 32).

Display 16 on page 38 shows the transfer history of the 12 community colleges in question, and confirms the University's statement that about 400 students transfer from these

*DISPLAY 15 Projection of First-Time Freshman Enrollment at the Proposed University of California at Merced, Using UC Estimated Participation Rates and Demographic Research Unit 1998 Projections of Public High School Graduates*

Item	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15
Regional HS Grads <sup>1</sup>	40,153	40,776	43,037	42,870	42,535	43,170	43,486	43,026	43,021	44,071
Existing Campus Participation Rate	3.3%	3.3%	3.3%	3.3%	3.3%	3.3%	3.3%	3.3%	3.3%	3.3%
UC Merced Increase:										
High Estimate	0.9%	0.9%	1.1%	1.2%	1.3%	1.5%	1.3%	1.3%	1.3%	1.3%
Low Estimate	0.8%	0.8%	0.9%	1.0%	1.1%	1.3%	1.1%	1.2%	1.2%	1.2%
Total Eight-County Participation Rate										
High Estimate	4.2%	4.2%	4.4%	4.5%	4.6%	4.8%	4.6%	4.6%	4.6%	4.6%
Low Estimate	4.1%	4.1%	4.2%	4.3%	4.4%	4.6%	4.4%	4.5%	4.5%	4.5%
UC Merced First-Time Freshmen										
High Estimate	361	367	473	514	553	648	565	559	559	573
Low Estimate	321	326	387	429	468	561	478	516	516	529
Median UC Estimate	328	326	403	467	510	579	509	538	543	571
UC Estimate of Freshmen from Outside the Eight-County Area	327	354	468	568	666	800	749	830	862	949
Outside Enrollment as a Percent of the Total	49.9%	52.1%	53.7%	54.9%	56.6%	58.0%	59.5%	60.7%	61.4%	62.4%
Total Freshman Enroll.	655	680	871	1,035	1,176	1,379	1,258	1,368	1,405	1,520

Source: UC, 1998, p. 31; Demographic Research Unit; CPEC Staff Analysis.

colleges each year, a number that has been stable in recent years. Because of that, it is optimistic for the University to project that transfers from these colleges will increase to 643 by 2005-06, and to 977 by 2014-15. The former number is a 56.5 percent increase from the 1996-97 level, with the 977 student transfer projection representing a 137.7 percent increase.

The projection appears optimistic because it incorporates a difficult assumption. As with first-time freshmen, it is unlikely that the existing eight general campuses will be “held harmless”; that they will receive transfers at the same rate that they receive them now. It is more likely that many transfers who would have been willing to travel long distances to attend a UC campus will now choose the proximity of Merced, particularly as the

**DISPLAY 16** *Community College Transfers to the University of California from Twelve Central Valley Community Colleges, 1992-93 to 1996-97*

<b>Community College and District</b>	<b>1992-93</b>	<b>1993-94</b>	<b>1994-95</b>	<b>1995-96</b>	<b>1996-97</b>	<b>5-Year Mean</b>
<i>Kern CCD</i>	<b>71</b>	<b>55</b>	<b>64</b>	<b>72</b>	<b>73</b>	<b>67</b>
Bakersfield College	57	39	37	49	40	
Cerro Coso CC	11	10	13	10	15	
Porterville College	3	6	14	13	18	
<i>Merced CCD</i>	<b>22</b>	<b>31</b>	<b>29</b>	<b>29</b>	<b>30</b>	<b>28</b>
Merced College						
<i>San Joaquin Delta CCD</i>	<b>101</b>	<b>94</b>	<b>86</b>	<b>79</b>	<b>97</b>	<b>91</b>
SJD College						
<i>Sequoias CCD</i>	<b>41</b>	<b>46</b>	<b>31</b>	<b>44</b>	<b>37</b>	<b>40</b>
Col. of the Sequoias						
<i>State Center CCD</i>	<b>93</b>	<b>90</b>	<b>111</b>	<b>80</b>	<b>102</b>	<b>95</b>
Fresno City College	79	80	86	69	87	
Kings River CC	14	10	25	11	15	
<i>West Hills CCD</i>	<b>2</b>	<b>6</b>	<b>3</b>	<b>5</b>	<b>1</b>	<b>3</b>
West Hills College						
<i>West Kern CCD</i>	<b>2</b>	<b>2</b>	<b>3</b>	<b>2</b>	<b>3</b>	<b>2</b>
Taft College						
<i>Yosemite CCD</i>	<b>61</b>	<b>75</b>	<b>58</b>	<b>79</b>	<b>68</b>	<b>68</b>
Columbia College	9	7	7	11	13	
Modesto JC	52	68	51	68	55	
<b>Total</b>	<b>393</b>	<b>399</b>	<b>385</b>	<b>390</b>	<b>411</b>	<b>396</b>

Source: CPEC, 1998.

campus grows and the curriculum expands and diversifies. Accordingly, while the Commission does not dispute the projection that UC Merced will receive 281 community college transfers in its first year, growing to over 650 in 2014-15, it is equally confident that the existing campuses will, in effect, be asked to contribute some of the transfers they have now to Merced's total. Most of those mature University campuses are already oversubscribed with applicants, however, and should have little difficulty replacing any potential transfers who may choose the local environs in the Central Valley.

*Graduate students* As noted in Display 12, the University anticipates that graduate students will comprise about 10 percent of enrolled students in 2005-06, the first year of operation, growing to

a 14 percent share by 2014-15. This projection, at least in comparison to the three most recently created campuses, appears to be reasonable. Of those, Santa Cruz only began with a graduate enrollment of 2.1 percent; not surprising given the campus's strong undergraduate emphasis. San Diego initially had more graduate students than undergraduates, but that was almost entirely because of its affiliation with the Scripps Institution of Oceanography. As noted above, Irvine is probably the best parallel to Merced, and it began with 8.8 percent graduate enrollment, which grew over 10 years to 14.3 percent, very similar to the plan for the new Merced campus.

The larger question is whether UC Merced can attract as many graduate students as planned, and it seems very likely that it can, for two primary reasons: its affiliation with the Lawrence Livermore National Laboratory; and the creation of the Sierra Nevada Research Institute, which is discussed more fully below in the academic planning section. The University has made no secret of the fact that it intends to incorporate a strong research emphasis at UC Merced, a policy that will inevitably attract research faculty, who will, in turn, attract a reasonable number of graduate students.

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*Enrollment  
summary*

Although the Commission does not agree with every element of the rationale presented by the University of California to justify its enrollment projection, its objections are relatively minor, and do not affect the overall conclusion that the enrollment projection is reasonable. This is the same conclusion reached by the Department of Finance's Demographic Research Unit, and accordingly leads the Commission to conclude that the University has met the requirements of the first criterion of its guidelines.

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**A consideration  
of alternatives  
and environmental  
impact**

*2.1 Proposals for new institutions should address at least the following alternatives: (1) the possibility of establishing an educational center instead of a university campus or community college; (2) the expansion of existing institutions; (3) the increased utilization of existing institutions, particularly in the afternoons and evenings, and during the summer months; (4) the shared use of existing or new facilities and programs with other postsecondary education institutions, in the same or other public systems or independent institutions; (5) the use of nontraditional modes of instructional delivery, such as "colleges without walls" and distance learning through interactive television and computerized instruction; and (6) private fund raising or donations of land or facilities for the proposed new institution.*

*6.1 A cost-benefit analysis of alternatives, including a consideration of alternative sites for the new institution, must be articulated and documented. This criterion may be satisfied by the Environmental Impact Report, provided it contains a comprehensive analysis of the advantages and disadvantages of alternative sites.*

*8.1 The proposal must include a copy of the final environmental impact report. To expedite the review process, the Commission should be provided all information related to the environmental impact report process as it becomes available to responsible agencies and the public.*



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*Programmatic  
alternatives*

The Commission's review of alternatives falls into two categories: (1) the alternatives to building a campus at all; and (2) if a campus should be built, has the University given a reasonable consideration to alternative sites.

With regard to the first issue, Criterion 2.1 above suggests six possibilities, and given the scale of the proposal, and the previous analysis of the University's overall statewide capacity, it is relatively easy to conclude that none of them represents a reasonable alternative to building the Merced campus, as noted below.

- ♦ *Educational centers:* The first suggestion is that an educational center might serve as an alternative to a new campus. Not only will this alone not meet the University's total long-range need to expand its capacity, the University is already proposing four educational centers as a part of the UC Merced proposal, including centers in Modesto (the Agricultural Center), Merced (the Tri-College Center), Fresno (UC Center), and Bakersfield. These will supplement the UC Merced central "hub," and should eventually add some capacity.
- ♦ *Expanding existing institutions:* The second suggestion involves the expansion of existing institutions, which is also part of the overall proposal for the new campus. As noted in Part Three of this report, President Atkinson has already suggested revisions in the Long Range Development Plans (LRDP's) of some of the existing campuses, enough to generate capacity for another 11,000 students. In addition, the Commission's analysis indicates that building the six non-impacted general campuses (all but Berkeley and UCLA) out to their current LRDP limits would generate almost 30,000 additional Full-Time Equivalent Student (FTES) spaces. Accordingly, it is fair to conclude that expansion of the existing campuses has already been taken into account.
- ♦ *Increased use of existing facilities:* The increased use of existing facilities has also been proposed, and is currently under study throughout the University. President Atkinson's proposal to the Regents suggested that another 7,000 FTES might be derived from that source. Others have suggested that an even greater number might be generated by extending summer or evening programs, and perhaps by instituting a full year-round schedule. This is surely a possibility, but changing academic calendars is not a simple matter, and it is a certainty that any proposal to use current facilities more intensively will require a comprehensive study that has yet to be performed. Further, the capacity data shown in Part Three of this report (Displays 8 and 10) strongly suggest that even a substantial increase in facilities usage will not close the projected gap between capacity and enrollment on a long-term basis, even when the Commission assumes (as it did in Display 10) that extended schedules can produce room for another 10,000 FTE students.
- ♦ *Shared use of facilities:* The shared use of facilities (item 4 of Criterion 2.1) is another proposal that may have some merit on the margin, but cannot contribute substantially to the capacity deficit the University is expected to experience in the coming years. It is undoubtedly true -- the issue is currently under study by the

Commission and the Association of Independent California Colleges and Universities -- that additional physical capacity exists in the independent sector, but the use of that capacity will require a substantial increase in student financial aid, an increase the Commission does not currently foresee occurring.

- ♦ *Educational technology*: The fifth idea, the use of electronic means to deliver instruction, is implied in the creation of the four educational centers that will accompany the creation of UC Merced. Exactly how that will occur, whether it will be more or less limited to University Extension activities or have a noticeable impact on the new campus's enrollment capacity, has not yet been determined. The Commission strongly supports the use of such techniques, and will continue to encourage the University to expand its use of electronic media to deliver instruction. Yet given the space and capacity deficits demonstrated earlier, as well as the fact that the academic plan is yet to be constructed in detail, it is unlikely that nontraditional modes of instruction will contribute greatly to reducing the space deficit in the near future. In the long run, and as the impact of computers and telecommunications expands, distance learning is likely to play a more prominent role in the future of all of education than is currently in evidence. The Commission anticipates, however, that at least some of the overall capacity need projected in Displays 8 and 10 will be created by this means.
- ♦ *Private fund raising*: As noted in Part Two, some fund raising has already occurred with the virtual donation of the 2,000 acres of land in the Virginia Smith trust. In addition, and as discussed in more detail below in the financing section, it is likely that UC Merced will be dependent on non-public sources of funds on a permanent basis. This is so for all University of California campuses now, of course, and given the public funding limitations already in evidence, will doubtless be true for the proposed new Merced campus as well.

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*Alternative site  
considerations and  
environmental  
impact*

Much of the site selection process was discussed in Part Three of this report, and there is an additional review below in both the discussion of the environmental impact report and the further review of the EIR's comments on transportation access. It is important to reiterate, however, that the University began its search for a new site by reviewing in some detail the qualifications of some 85 to 100 sites. As the environmental consultant noted:

More than 85 sites in the Central Region were considered. Through analysis of such factors as transportation, demographics, housing, geotechnical conditions, public support, environmental constraints, and availability of public services, the University narrowed the number of sites to the three finalist(s) . . . (EIP, 1994, p. 1-2).

The final choice was informed by the Legislature's decision to appropriate \$1.5 million in 1993 to conduct a comprehensive environmental impact report on the three finalist sites, Academy, Lake Yosemite, and Table Mountain (Ibid.). That report reached a number of conclusions that the Commission has summarized in Display 17 below:

For most environmental issues, it appears that Lake Yosemite was the preferred site. For the Commission, however, that is a lesser issue than the fact that the process itself had considerable integrity. The Commission's role is not to "second guess" the Regents on site selection, but rather to assure that the process is one in which impartial observers can have confidence. In the present case, the Commission believes the University has met that standard.

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*DISPLAY 17 EIP Associates Summary of Environmental Issues*

<b>Environmental Issue</b>	<b>Summary of Findings</b>	<b>Most Positive Site(s)</b>
<i>Archeological Resources</i>	Some potential for discovery at Lake Yosemite and Table Mountain. Extensive known prehistoric archeological sites at Academy.	Lake Yosemite Table Mountain
<i>Air Pollution</i>	"... the impacts on regional and local pollutants are similar at the three sites."	All Equal
<i>Biological Resources</i>	All three sites have wetlands and some threatened species of both plants and animals. Major riparian (streamside) issues at Academy and Table Mountain; none at Lake Yosemite. Academy and Table Mountain have many special status plant and animal species; less at Lake Yosemite. Major oak habitat issues at Academy; none at Lake Yosemite and Table Mountain.	Lake Yosemite
<i>Geology, Seismicity, and Soils</i>	Seismic issues similar on all three sites. Use of chemical pesticides at Table Mountain. Underground storage tanks at Academy. No contamination at Lake Yosemite.	Lake Yosemite
<i>Hydrology and Water Quality</i>	All sites require off-site construction of storm drainage system. Table Mountain partially susceptible to flooding if Friant Dam should fail.	Academy Lake Yosemite
<i>Land Use and Planning Policies</i>	All three sites will have significant and unavoidable issues as a result of campus construction. As noted above, Table Mountain contains prime farmland.	Academy Lake Yosemite
<i>Prime Farmland</i>	Only Table Mountain contains prime farmland.	Academy Lake Yosemite
<i>Transportation Systems</i>	All three sites require substantial expansion and investment to accommodate traffic. Rights of way exist in Merced. Rights-of-way in North Fresno (Academy and Table Mountain) for east-west travel "have been severely restricted." See further discussion below under "Geographic and physical accessibility."	Lake Yosemite
<i>Visual Quality and Resources</i>	Each of the three sites would be changed extensively by the presence of a UC campus. There would be variable significant effects on each site, many of which could not be mitigated.	All Equal
<i>Water Supply</i>	Local irrigation districts planned to provide water to UC sites at Lake Yosemite and Academy; no planning for Table Mountain.	Academy Lake Yosemite

Source: EIP, 1994.

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**Academic planning  
and program  
justification**

*4.1 The programs projected for the new institution must be described and justified. An academic master plan, including a general sequence of program and degree level plans, and an institutional plan to implement such State goals as access; quality; intersegmental cooperation; and diversification of students, faculty, administration, and staff for the new institution, must be provided.*

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*Introduction*

In its description of criteria used to evaluate proposals for university campuses, community colleges, and educational centers, the Commission's *Guidelines* state that the programs projected for a new campus must be described and justified. Further, an academic master plan to implement such State goals as access, quality, intersegmental cooperation, diversification of students, faculty, administration, and staff must also be provided. Although these elements may be discerned throughout the series of documents prepared by the University for the Board of Regents, the Legislature, the Commission, and other entities, the academic plan for UC Merced is clearly still evolving. Not surprisingly, the University's thinking with regard to that plan has changed over time, as have the principals involved. But, with each succeeding iteration, the outline for the tenth campus is becoming more finely drawn, and the academic plan more clearly defined. What is not clear, however, is the extent to which each new statement replaces the old. When an academic direction has been mentioned once, does it still exist even though it isn't mentioned again or should one assume that it has been changed and no longer exists within the more recent plan?

In this report, the Commission has incorporated elements from the three most recent planning documents from the University. Ultimately, of course, the academic plan for UC Merced will rest with the new Chancellor and start-up faculty who will bring their own vision for the campus to build upon the work that has already occurred.

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*Planning context*

In order to understand the structure of the current plan and the concepts underpinning the academic planning process, it has been necessary to draw from a number of reports, and to understand the context for the planning that has occurred during the last decade. Over that time, the Office of the President has asked two faculty committees for advice on the academic plan. The first committee completed its work in 1991 at a time when the budgetary climate was beginning to slow planning for the campus. Later, as the fiscal environment stabilized and then improved, a second advisory committee, the Tenth Campus Academic Planning Committee, was formed. Chaired by Daniel Simmons, Professor of Law at the Davis campus, the group included faculty from the University and representatives from the California State University and the California Community Colleges. This second faculty committee issued its final report -- the "Simmons Study" -- on November 7, 1997. In a communication to the Commission, the Office of the President described the work of these two committees:

Both committees assessed in depth the research and curricular opportunities available to a new research campus located in the San Joaquin Valley. Both looked in detail at UC's history of new campus development and commissioned interviews or met with key figures in creation of UC's three new campuses of the 1960's -- Irvine, San Diego, and Santa Cruz. Both analyzed what seemed to be most and least effective educationally in UC and in higher education across the country. Based on these assessments, both offered recommendations about an array of academic programs and other educational and research activities and organizations that could lead to creation of an outstanding campus that would fully realize UC's mission of teaching, research, and service (UC, 1999c).

Recently, a Task Force of the Universitywide Academic Senate has been formed to take the campus's planning to the next level. Based on this effort, along with that of the Office of the President, and widespread consultation within and outside the academy, a number of fundamental decisions about the academic shape of the campus have been made.

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*Academic direction  
for the campus*

The University of California at Merced will begin with an emphasis on science and technology. Undergraduate education is expected to include a general education curriculum; a major, which would include opportunities for participation in faculty-directed research; and an experiential learning component that could include public service. Majors will be developed in core science and engineering, social science, humanities, and the arts. The campus's anticipated focus will be on the biological sciences, computer sciences with related engineering, and social sciences that support policy studies, in addition to selected humanities and arts disciplines. Early development of graduate and professional degree programs is also projected in several areas of engineering, information technology and management, policy studies, educational leadership or another field of education, and international business administration.

With these emphases in mind, the University's *Needs Study* projects that the following phase-in of programs might be anticipated:

Fall 2005	4 undergraduate majors in science, technology, and engineering 2 undergraduate majors in social sciences 2 undergraduate majors in humanities/arts
Fall 2005	3-5 graduate programs in science/technology (includes master's, professional, and doctoral level programs)
Fall 2010	8 undergraduate majors in science, technology, and engineering 4 undergraduate majors in social sciences 4 undergraduate majors in humanities/arts 5-7 graduate programs
Fall 2015	12 undergraduate majors in science/technology 6 undergraduate majors in social sciences 6 undergraduate majors in humanities/arts 7-9 graduate programs

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*Research identity*

In developing a distinctive research identity for the campus, its planners have examined existing networks as a basis for initiating academic programs. The Commission believes this is a very creative strategy -- extending, and where necessary, reshaping the existing strengths of the University of California to develop related strengths appropriate to its newest campus. Planners turned to three existing networks: (1) UC's multicampus research organizations (MRU's); (2) the Lawrence Livermore National Laboratory; and (3) several existing humanities, social sciences, and policy studies-oriented units, like the UC Humanities Research Institute in Irvine. Three advisory groups were then formed from these partnerships to advise on initiatives that could support faculty recruitment for the Merced campus in the short-run, and in the long-term, serve as the base for the academic programs that would be offered by the campus. Each of these initiatives is discussed below.

♦ *The Multicampus Research Unit Strategy: The Sierra Nevada Research Institute and Selected Biological Sciences, Physical Sciences, and Social Sciences*

The Office of the President approached UC's multicampus research organizations (MRU's -- e.g. White Mountain Research Station and the UC Davis Institute for Transportation Studies) for proposals on how these various interdisciplinary networks might contribute to building the UC Merced campus; the directors of these MRU's met as an advisory group. Several proposals emerged to demonstrate how the new campus could contribute to Sierra-Nevada-oriented research, and three projects were funded. The first focuses on improved transportation planning from the gateway communities around Yosemite National Park to the Park, and on clean vehicle use within the park. The second translates scientific findings from the Sierra Nevada Ecosystem Project, a major cooperative research effort among UC, federal agency, and other scientists into readily accessible electronic forms that can be used by natural resource agency and county planners. A related effort to locate a Natural Reserve System site close to UC Merced was linked to the Sierra Nevada projects. The purpose of the Natural Reserve System is to preserve, for research and education, sites that are representative of California's rich biological diversity.

Over several months, this advisory group shaped a concept -- The Sierra Nevada Research Institute -- that grew well beyond the initial proposals. The Institute will focus on the complex questions of natural resource science, management, and policy that include population growth and sustainability of resources; prime agricultural land and wild lands; water and air quality; global climate change; biodiversity and fire ecology; waste management and toxicology; transportation; and social and economic consequences of resource availability and management. Around these questions will grow selected programs in the Biological Sciences, Physical Sciences, and Social Sciences. Work on these questions also points to fruitful partnerships with the State and federal agencies that manage Sierra lands, particularly the three national parks located nearby -- Yosemite, Sequoia, and Kings Canyon -- which are prepared to collaborate with UC's K-12 outreach initiatives in the Valley and also offer undergraduate internships.

- ♦ *The Lawrence Livermore National Laboratory Strategy: Engineering, Computer Science, and Environmental Sciences*

Livermore's relative proximity to the Merced site has led to a series of discussions about the kinds of projects on which the two entities might collaborate. Access to the equipment and intellectual expertise at Livermore will be a powerful recruitment device to attract high level faculty candidates to Merced. A UC Merced Engineering Advisory Group has been formed to recommend the steps necessary to start up strong engineering, computer science, and related programs. The advisory group will make its recommendations this summer. Lawrence Livermore is also prepared to contribute to UC's K-12 outreach efforts in the Valley and employment opportunities for undergraduates in science and engineering.

- ♦ *Community and Policy Advisory Group: Social Sciences, Humanities, and Arts Programming*

The University's Merced planners have begun work with a coalition of social science, humanities, and arts multicampus research organizations -- the forenamed community and policy partnership -- to create dual research strengths in policy and other studies building upon the San Joaquin Valley's diversity of both people and cultures. The coalition has initially recommended development of a California Research Institute that would work on policy studies and public service, including public policy, regional planning and land use, K-12 policy, criminal justice policy, and contemporary rural studies. The Institute would also offer joint writers/artists residencies, possibly with a digital arts emphasis. This third advisory group consists of several social science and policy studies units, including the UC Humanities Research Institute and the Intercampus Arts Program, both in Irvine. It has met twice thus far and will continue its work into 1999-00.

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*Work of the  
Universitywide  
Academic Senate*

Since the Regents have delegated to the Universitywide Academic Senate the responsibility to create courses and degree programs, the Senate appointed the UC Merced Task Force on September 9, 1998, a group consisting of representatives from each of the nine campus Senate divisions, the Vice Chair of the Academic Council, and leaders from the five Universitywide Senate committees -- Graduate Affairs (CCGA), Academic Personnel, Educational Policy, Planning and Budget, and Research Policy. The committee recently completed its first report on academic planning conditions and program implementation at UC Merced that includes an initial set of comments on academic organization, undergraduate education, graduate education, phasing-in, libraries, K-12 outreach, and the UC educational network being established in the San Joaquin Valley. The principal points raised in this report are the following:

- ♦ *Departments will be the basic organizational building blocks of the academic structure.* The Senate report observes that, since there will be few faculty, the administration should also be small. The Simmons Study recommended three divisions as the organizing principle -- Social Science and Public Policy, Science and

Technology, and Arts and Cultures. While this view did not exclude discipline-oriented academic departments existing within the divisions, this early model may have proved to be less traditional in that the divisions would amalgamate programs that are often separated into core academic and professional schools; stress was also placed on studies addressing multidisciplinary programmatic themes. The more recent Senate report refers to the Bylaws of the Academic Senate that imply the existence of departments. It will, however, be the first chancellor who, upon consultation, will determine the basic academic structure of the campus.

- ♦ *Initial recruiting of faculty should establish strong groups that can develop UC-level reputations within departments rather than attempting to cover all aspects of a particular field from the start.* While the Senate wisely promotes a focused recruitment strategy, it also recognizes the importance of long-range vision on the part of the founding faculty and the need for a diverse array of departments on campus to attract students to UC Merced. The report continues that the number of departments at opening in 2005 could be anywhere from six to ten, divided between science/technology and social sciences/humanities/arts. The distribution of faculty by broad discipline at the existing UC campuses is approximately half in sciences and engineering, 25 percent in the social sciences, and 25 percent in the humanities and arts. The Academic Senate Task Force expects that the same ratios will prevail at Merced.
- ♦ *Development of the General Education component will be the single most important task for the founding faculty.* Calling it “the defining undergraduate educational element of UCM,” the Task Force envisions the general education program assuming any one of a variety of forms but, at a minimum, encompassing the Inter-segmental General Education Transfer Curriculum (IGETC). Indeed, the community colleges are seen as potential partners for teaching in areas such as Subject A, basic foreign language, and mathematics.
- ♦ *The Merced campus is expected to play a role in this educational arena (graduate education) comparable to that of the other general campuses.* The Task Force recognizes that during the early years the graduate programs offered by the campus will most likely be those growing out of the research areas of the lead founding faculty members and the partnerships delineated earlier in this report. It posits that professional programs could be developed soon after the campus opens, with Master’s degrees in Engineering and Social Sciences, including Information Technology and Management and Policy Studies, specifically noted. The first graduate professional school should not be implemented until five to eight years after the campus opens.

The Academic Senate Task Force has made a start on the issues that must be resolved before UC Merced accepts its first students, but the extent of the work remaining will demand much additional time and effort. The Task Force will continue its deliberations through the year 2000.



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*Related initiatives*      Related to the planning for the academic programs on the new campus is the work of University Extension. During 1998, this arm of the University served about 1,000 students in the San Joaquin Valley through about 40 courses in a broad array of disciplines including agriculture, education, business, health, environmental sciences, land use, and computer science. These course offerings are being expanded each year with the goal of serving over 2,000 students annually by 2001 when the University will have learning centers located not only in Fresno but in Merced, Modesto, and Bakersfield as well. UC Merced has established a new Division of Professional Studies, funded from non-State sources, to increase the scope and variety of these courses.

It appears that these courses have prompted the Office of the President to sponsor studies to determine the feasibility of offering specific degree programs in the Valley, either through distance learning or located at the UC learning centers in the area. In the University's first annual report submitted March 5, 1999 to the Legislature on expenditures relating to the Merced campus, as requested in the Supplemental Report on the 1998 Budget Act, the University stipulates the following degree programs are under consideration:

- ◆ Masters Degree in Computer Science (1998-99 feasibility study);
- ◆ Joint Graduate Degree in Health Sciences with the California State University (1998-99 feasibility study);
- ◆ Joint Bachelors Degree in Environmental Studies (1998-99 feasibility study, 1999-2000 potential program design) with the California State University;
- ◆ Masters Degree in Business Administration (1999-2000 program design);
- ◆ Masters Degree in Computer Engineering (1999 feasibility study);
- ◆ Masters Degree in Public Policy (1999-2000 feasibility study).

While the Commission understands the University's desire both to serve residents of the San Joaquin Valley and to create a programmatic presence there, it is not clear how these particular programs align with the work of the advisory committees described above. There are also questions about the definition of a feasibility study and program design, what kind of graduate degree in the Health Sciences is meant, and the intricacies of offering a joint degree between the University and the State University.

It is also not clear if these programs are part of the University's strategy, mentioned in its November 1998 Needs Study, to offer a small array of selected undergraduate and graduate degree programs prior to UC Merced's official opening in 2005. That report indicated that the feasibility of this approach was being assessed, and that it was a possible planning direction.

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*Public school collaboration*      As already mentioned, the decision has already been made for the campus to begin with science and technology. This choice has led, in turn, to the strong emphasis on math and science, both in student preparation and the professional development of teachers, with-

in the University's K-12 outreach initiatives in the Valley. Three programs are already in place that exemplify such efforts. Using trainers from the Lawrence Hall of Science, the Great Explorations in Math and Science (GEMS) program provides new math and science teaching strategies for elementary and middle school instructors throughout Fresno and Kern counties; work is also underway with Mariposa, Tulare, and Merced counties to expand the program in those areas. Teachers from three of these counties will be involved with three laser and optics workshops this summer, in cooperation with the Lawrence Livermore National Laboratories. UC Merced has also partnered with the Fresno Unified School District and the National Science Foundation to provide on-going science training for teachers through the National Science Foundation's Urban Systemic Initiative.

This summary of the University's academic planning activities for UC Merced covers progress to date, but is in no way a definitive description or analysis of what may eventually become the campus's academic plan. That plan is evolving, and will continue to change as a new chancellor and founding faculty direct the research and instructional future of the new institution.

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<b>Geographic and physical accessibility</b>	7.1 <i>The physical, social, and demographic characteristics of the location and surrounding service areas for the new institution must be included.</i>
	7.2 <i>There must be a plan for student, faculty, and staff transportation to the proposed location. Plans for student and faculty housing, including projections of needed on-campus residential facilities, should be included if appropriate. For locations that do not plan to maintain student on-campus residences, reasonable commuting time for students defined generally as not exceeding a 30-45 minute automobile drive (including time to locate parking) for a majority of the residents of the service area must be demonstrated.</i>

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*Physical, social, and demographic characteristics*

The University's Needs Study provides an adequate description of the demographics of the Merced and San Joaquin Valley areas (UC, 1998). The University notes that the eight counties in the Valley account for just under ten percent of the State's population, and presents a table that arrays that population by ethnic group. The Commission has updated those data based on the most recent population history and projection developed by the Demographic Research Unit (DRU), as shown in Display 18. Display 19 shows the eight-county group's projected growth through 2020, again based on the most recent DRU projection. Overall, it can be seen that the Central Valley's Hispanic population is a greater percentage of the population than is the case statewide, and that it is growing faster. By 2020, it should exceed the White population by a narrow margin. The fastest growing group in the Central Valley is Asian/Pacific Islanders. Their growth rate between 1990 and 2020 is 3.7 percent per year, compared to a 3.2 percent rate for Hispanics, and a 2.5 percent rate for Whites. American Indians are growing at a 1.9 percent rate, with African-Americans at just under one percent (0.9%).

**DISPLAY 18** *California and San Joaquin Valley Population, by Ethnicity, 1998*

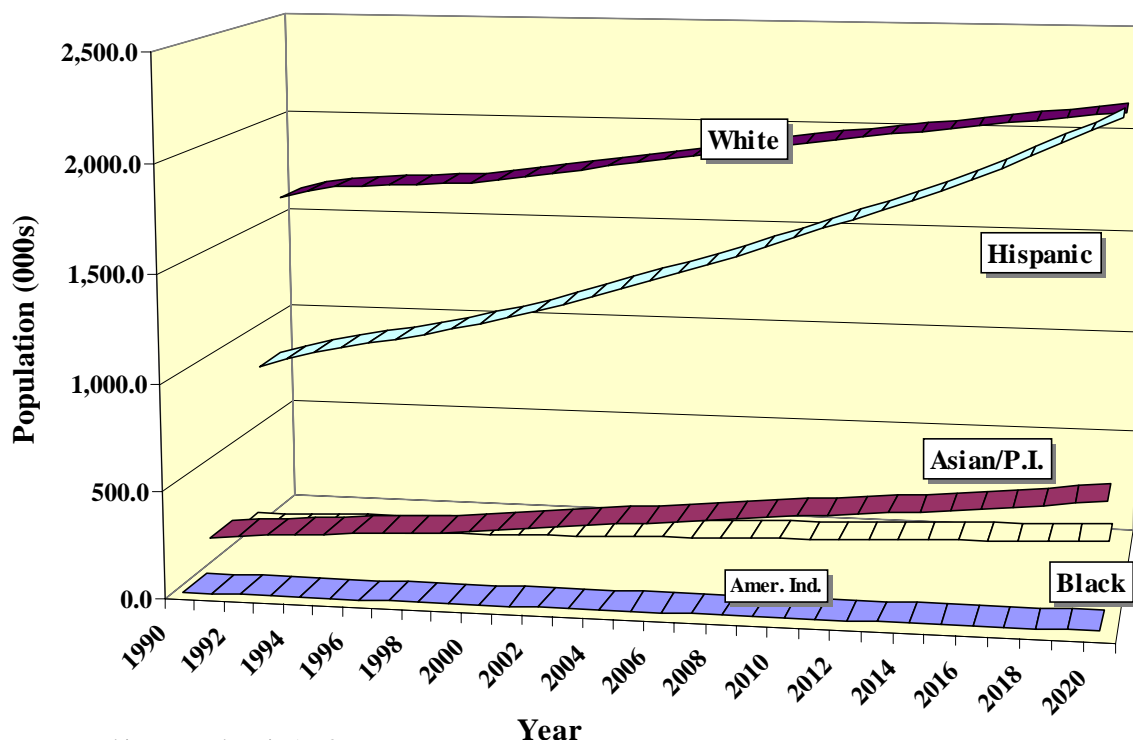
<b>County</b>	<b>American Indian</b>	<b>Asian/Pac. Island.</b>	<b>Black</b>	<b>Hispanic</b>	<b>White</b>	<b>Total</b>
Fresno	6,858	80,665	37,946	304,895	358,955	789,319
<i>Percentage</i>	0.9%	10.2%	4.8%	38.6%	45.5%	100.0%
Kern	6,808	20,774	38,115	207,133	375,327	648,157
<i>Percentage</i>	1.1%	3.2%	5.9%	32.0%	57.9%	100.0%
Kings	1,036	4,637	9,403	44,978	59,793	119,847
<i>Percentage</i>	0.9%	3.9%	7.8%	37.5%	49.9%	100.0%
Madera	1,263	1,568	5,010	44,174	65,343	117,358
<i>Percentage</i>	1.1%	1.3%	4.3%	37.6%	55.7%	100.0%
Merced	1,226	20,817	8,444	74,188	101,579	206,254
<i>Percentage</i>	0.6%	10.1%	4.1%	36.0%	49.2%	100.0%
San Joaquin	4,005	78,224	29,438	141,014	301,582	554,263
<i>Percentage</i>	0.7%	14.1%	5.3%	25.4%	54.4%	100.0%
Stanislaus	4,152	26,931	8,267	108,454	287,031	434,835
<i>Percentage</i>	1.0%	6.2%	1.9%	24.9%	66.0%	100.0%
Tulare	3,400	17,739	5,079	159,059	179,058	364,335
<i>Percentage</i>	0.9%	4.9%	1.4%	43.7%	49.1%	100.0%
<b>San Joaquin Valley</b>	<b>28,748</b>	<b>251,356</b>	<b>141,702</b>	<b>1,083,898</b>	<b>1,728,672</b>	<b>3,234,375</b>
<i>Percentage</i>	<b>0.9%</b>	<b>7.8%</b>	<b>4.4%</b>	<b>33.5%</b>	<b>53.4%</b>	<b>100.0%</b>
<b>California</b>	<b>199,747</b>	<b>3,716,953</b>	<b>2,309,152</b>	<b>10,022,551</b>	<b>17,258,003</b>	<b>33,506,406</b>
<i>Percentage</i>	<b>0.6%</b>	<b>11.1%</b>	<b>6.9%</b>	<b>29.9%</b>	<b>51.5%</b>	<b>100.0%</b>
<b>San Joaquin Valley as a Percentage of Total California Population</b>	<b>14.4%</b>	<b>6.8%</b>	<b>6.1%</b>	<b>10.8%</b>	<b>10.0%</b>	<b>9.7%</b>

Source: Demographic Research Unit, Department of Finance, 1999.

The University also offered a useful summary of the educational and income characteristics of the area:

The statewide figure for median years of education is 13.4 while the figures for Valley counties range from 12.4 to 12.7 years. The educational gap is even greater when comparing Valley residents to individuals living near the major metropolitan areas of Los Angeles, San Francisco, and San Jose. Median years of education in some suburban counties go as high as 14 to 15+ years.

DISPLAY 19 Actual and Projected Population in the San Joaquin Valley, 1990 to 2020, by Ethnicity



Source: Demographic Research Unit, 1998.

Overall eligibility and college-growing rates in the San Joaquin Valley continue to lag behind those in most other parts of the state. Although there has been a slight increase in UC eligibility in the San Joaquin Valley, only 5.4% of the northern Valley high school graduates and 6.0% of the southern Valley graduates are eligible for the University of California, compared with an overall statewide eligibility of 11.4%. In addition, only a small percentage of students attending community colleges in the Valley continue their education at the University of California (UC, 1998a, p. 8).

The University went on to note that University of California participation rates among Central Valley residents are about half the State average, but that they have grown some in recent years. The Needs Study then noted some relevant statistics concerning personal income:

Income figures in the Valley also lag behind the state's. Per capita income for the region for 1997 was \$18,976, compared to \$26,314 statewide. The disparity between per capita income of Valley residents and all Californians has grown since 1990. In that year, the Valley figure was 25% below the state mark; now it is 27% below the statewide figure. Kings County has the lowest per capita income of all eight counties (\$15,152 or more than 42% below the statewide figure). Though a slightly different measure, family income for the San Joaquin Valley region likewise falls far below that of the state. Data from (the)

last census indicate that family income for Valley counties was an average of 25% below family income statewide. High unemployment rates confirm the difficult economic circumstances of the region. The March 1998 unemployment rate was 6.0% statewide but 15.3% for San Joaquin Valley counties. (Ibid.)

The University is well aware of the social and economic condition of many San Joaquin Valley residents, as well as the poor participation rates that almost inevitably seem to derive from that condition, and has accordingly developed numerous initiatives to encourage students to further their educational progress. Those initiatives are discussed in the next major section of this report under “Serving the disadvantaged.”

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*Transportation  
issues*

The environmental impact report reviewed all existing transportation facilities within the vicinity of each of the three final sites, and evaluated the possible impacts of a UC Merced campus on traffic for automobiles, transit, bicycle, and pedestrian modes of travel through the year 2035. In all three cases, it found impacts that would probably be both significant and unavoidable. The specific summaries are as follows:

Lake Yosemite -- Portions of Highways 59, 99, and 140 would be impacted to unacceptable service levels, but could be mitigated through roadway improvements in each case. The EIR regarded these impacts as “significant and unavoidable,” however, because removing the negative consequences -- by widening the roads -- of building UC Merced lies outside of the University’s purview, and within the responsibilities of the City of Merced, the County of Merced, and the State Department of Transportation (Caltrans).

Table Mountain -- Several roads in the vicinity of the site would operate at unacceptable service levels, some of which cannot be mitigated. Other negative consequences to Highways 41 and 99 could be mitigated -- by widening the roads -- but are under the control of the City of Fresno, Fresno County, Madera County, or Caltrans.

Academy -- Several streets and Highways 41, 99, and 168 would all operate at unacceptable levels of service, with no reasonable mitigations to the streets involved. As with the other sites, widening the highways would resolve the inherent difficulties, but such corrections can only be made by the jurisdictions involved, including Caltrans, Fresno County, the City of Fresno, and the City of Clovis (EIP, 1994, p. I-22, 23).

The report from EIP Associates should cause concern among both transportation planners and the University of California. The EIR suggests strongly that major highway widening projects will have to be undertaken -- probably by 2010 at the latest -- to correct the negative consequences caused by the increased population and traffic that will inevitably accompany a successful UC Merced campus. There will also be major construction projects involving roadways near the campus, connecting routes to Highway 99 (see the dotted line indicating a “beltway” type construction to the campus in Display 2 in Part Two of this report), and various kinds of rail and bus transit infrastruc-

ture. At present, there are few indications of the extent of this transportation infrastructure, its cost, or the source of funds to build it. As noted further below under “Consideration of needed funding . . .,” it is one of the many questions surrounding the ultimate cost of building UC Merced for which there are currently no satisfactory answers.

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**Serving the  
disadvantaged**

*3.1 The new institution must facilitate access for disadvantaged and historically underrepresented groups.*

The University currently has underway, and is in the process of expanding, a large array of services to the residents of the Central Valley. In many ways, these are not strictly services to the disadvantaged or historically underrepresented, but comprehensive services that may be of benefit to many students.

An example is the Office of Relations with Schools (ORS), which the University established in 1986 in the Valley “to focus on the eligibility and college-going rates of San Joaquin Valley students.” The University believes these efforts have improved participation in the past 12 years, and that further efforts will not only improve participation overall, but specifically encourage more students to attend UC Merced. As the Needs Study observes:

Recently, the UC Outreach Task Force issued its recommendations for expanding partnerships and collaboration with K-12 and the California Community Colleges, and, as a result, the University has built on ORS activities by initiating new student and school-centered programs. To support these new efforts, \$1 million of the state’s most recent allocation to UC for outreach is targeted to expanding efforts in the Valley, and this amount is being supplemented from other sources. Within two years, outcomes of these programs should be seen, increasing eligible and competitively-eligible levels among high school graduates and ultimately increasing representation of Valley students at the University of California (UC, 1998a., p. 9).

Elements of these programs include conferences, workshops, literature, newsletters, college fairs, and other ventures, and the University indicates that the burgeoning telecommunications system will extend their reach further. The University lists several examples of its efforts, including:

- ♦ School partnerships -- direct involvement with four school districts (Fresno Unified, Parlier Unified, Merced Union High School, and Bakersfield Union High School) to enhance literacy, improve computer skills, and generally to increase the number of UC eligible students;
- ♦ Professional Development Opportunities for K-12 Teachers in the Valley;
- ♦ Linking Outreach to technology -- another teacher professional development program, but geared strongly to technology in general, and networking in particular; and
- ♦ Community College Programs -- significant efforts to create learning centers throughout the Central Valley (e.g. the Merced Tri-College Center) that will increase community college student awareness of the University’s presence in the Valley.

Throughout this section of its Needs Study, the University stresses that planning for outreach and student services is in the early stages of development. To aid in that planning process, the University formed the UC Merced Student Planning Advisory Committee to answer many of the questions surrounding student-service needs. Membership on the committee includes not only a student, but also administrators, a high school counselor, and a community college instructional officer with expertise in such areas as admissions, housing, financial aid, recreation, and other aspects of student life.

At this stage of the planing cycle for any new campus, or even an educational center, there are often more questions than answers, but it is reasonable to presume that the new campus will offer an array of services not unlike those to be found at other University of California campuses, including housing, placement, student financial aid, tutoring, and counseling. The formation of the student planning committee will doubtless aid in this process, and should produce an array of services that will have a noticeable impact on the educational life of the Valley.

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**Effects on other institutions**

*9.1 Other systems, institutions, and the community in which the new institution is to be located should be consulted during the planning process, especially at the time that alternatives to expansion are explored. Strong local, regional, and/or statewide interest in the proposed facility must be demonstrated by letters of support from responsible agencies, groups, and individuals.*

*9.2 The establishment of a new University of California or California State University campus or educational center must take into consideration the impact of a new facility on existing and projected enrollments in the neighboring institutions of its own and of other systems.*

The University has consulted widely with other institutions in the San Joaquin Valley, and appears to enjoy the enthusiastic support of most residents in the region. Governor Davis, Governor Wilson before him, all Central Valley legislators, numerous citizens groups, and almost all of the institutions of higher education in the region have been enthusiastic about the new campus.

Specifically, the University has received letters of support from the following individuals, groups, and organizations:

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<u>Author of Letter</u>	<u>Organization</u>
Walter L. Buster, District Superintendent	Clovis Unified School District
Dennis Cardoza	Assembly Member, 26 <sup>th</sup> District
Gary Condit	Member of Congress, 18 <sup>th</sup> District – California
Benjamin T. Duran, Superintendent/President	Merced Community College District
Pamila Fisher, Chancellor	Yosemite Community College District
Marvalene Hughes, President	California State University, Stanislaus
Mary Jo Knudsen, Mayor	City of Merced

Peter G. Mehas, Superintendent	Fresno County Office of Education
Dick Monteith	Senator, 12 <sup>th</sup> District
Jim Riggs, President	Columbia College
Bill F. Stewart, Chancellor District	State Center Community College
Ronald Tiffie, Superintendent	Merced County Office of Education
Bill K. Tilley	Superintendent, Merced Union High School District
Patricia Wayne, Mayor	City of Clovis
John Welty, President	California State University, Fresno

Source: UC, 1998a, Appendix B

The Commission is persuaded that many more letters of support could be generated were there a need to do so.

The only letter submitted to the University that was not entirely enthusiastic was from Donald V. DeRosa, President of the University of the Pacific. He noted that the planned opening enrollment of 1,000 FTES is about the same as the excess capacity at UOP, but added, "I am certain we can both be successful." Dr. DeRosa further makes it clear that his difficulty is not so much with the University, but with the deficiencies in student financial aid. He observes that "... in the discussions for the renewal of the Compact for Higher Education there has been no discussion of the role of student aid, an issue of great importance to the independent sector." Finally, however, he indicated his willingness to work with the University "in the spirit of genuine cooperation and in the interest of all California students."

The letters of support from neighboring community colleges and California State University campuses give no indication of a possible conflict or negative impact. President John Welty of California State University, Fresno appears to look forward to "a strong collaborative relationship," while President Marvalene Hughes of California State University, Stanislaus indicates that "we enthusiastically support the initiative of the University of California in its efforts to establish its new campus . . ." Similar sentiments can be found in all of the other letters listed above (UC, 1998a, Appendix B).

Strong local support is normal for almost any proposal for a new institution, since both educational and economic benefits are clearly identifiable. The issue of possible adverse consequences on neighboring institutions, however, is more complex, and may exist even when there are no overt statements that say so. In the present case, when no academic plan has been proposed, it is impossible to tell if conflicts will or will not arise with community colleges or California State University institutions, but the Commission is concerned that the University work very closely with neighboring institutions in both the public and independent sectors to assure that such conflicts, if they exist at all, are kept to a minimum.



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**Consideration of  
needed funding  
and economic  
efficiency**

- 5.1 *A cost analysis of both capital outlay estimates and projected support costs for the new institution, and possible options for alternative funding sources, must be provided.*
- 10.1 *Since it is in the best interests of the State to encourage maximum economy of operation, priority shall be given to proposals for new institutions where the State of California is relieved of all or part of the financial burden. When such proposals include gifts of land, construction costs, or equipment, a higher priority shall be granted to such projects than to projects where all costs are born by the State, assuming all other criteria listed above are satisfied.*
- 10.2 *A higher priority shall be given to projects involving intersegmental cooperation, provided the systems or institutions involved can demonstrate a financial savings or programmatic advantage to the State as a result of the cooperative effort.*
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*Planning costs*

In its Needs Study, the University acknowledged that the Commission's *Guidelines* require fiscal projections for the new campus, as noted in Criterion 5.1 above. The University also indicated that "During the next six months, UC Merced staff will be developing a budget model to look at program phasing and budget requirements" (UC, 1998a, p. 45). The Needs Study, with supplemental submissions, presents information on the operational costs for the Merced campus through the year 2010-11, as shown in Display 20. Further, in response to Supplemental Language in the 1998-99 State Budget, the University submitted to the Legislature a budget report for the past, current, and budget years (See Appendix C). It itemized expenditures of \$4.9 million for 1997-98 (the year of the first planning appropriation of \$4.9 million), \$9.9 million for 1998-99, and another \$9.9 million for 1999-00. These amounts were supplemented by Short-Term Investment Program funds in the amount of a few hundred thousand dollars each year.

In 1997-98, the University spent about \$1 million on the proposed campus, most for various planning activities, but also to lease certain facilities in the Valley, and carried almost \$4 million forward. In the current year, 1998-99, the University projects expenditures of about \$8.7 million for planning activities, with over half of that directed to physical planning for the new campus. In the budget year, expenditures will be about \$8.5 million.

The fiscal projection shown in Display 20 suggests that UC Merced will be an expensive operation in its initial years. This is normal because it reflects both startup costs and the fact that economies of scale cannot be realized until the campus has achieved an enrollment of at least 5,000 students. Consequently, opening year (2005-06) costs are currently projected to be \$29,070 per FTES, which should shrink to \$13,700 per FTES in 2010-11 as the campus grows, a number reasonably close to the cost per FTES at other campuses. This cost reduction over time is also a reflection of the fact

that the student-faculty ratio, initially 10-1, will rise to 16.7-1, again near the University's statewide average.

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*Capital outlay costs*     On July 18, 1997, the Regents discussed a status report on the Merced campus that included some indications of capital costs. Specifically, the item stated:

The capital funding requirements for a campus that can support 5,000 students in its initial phase have been estimated based on a model which projects building requirements by space type over time based on estimated enrollment levels and number of faculty -- for example, space needed for classrooms, offices, and laboratories. The model also includes a projection of infrastructure requirements by quantity -- for example, linear feet of roads, underground utility distribution, and central plant equipment. The model includes unit costs for each type of space and category of infrastructure in order to calculate capital funding requirements based on the amount of space and quantity of infrastructure that would be constructed.

The current estimate is that approximately \$400 million (expressed in 1997 dollars) in State capital funds would be required to develop a campus for 5,000 students. This includes approximately \$250 million prior to the opening of the campus in 2005 and another \$150 million in the period 2005 to 2010 to support growth to 5,000 students. Capital funding requirements are higher in the initial period because core space must be available on opening day for most programs and activities and because initial infrastructure requirements are not directly related to enrollment levels (UC, 1997d, p. 10).

In a September 9, 1998 letter to Vice Provost Tomlinson-Keasey, the Commission asked for the detail in the model referred to in the Board of Regents item, including specifically a delineation of the \$400 million and \$250 million figures, as well as the estimated operating cost of \$50 million per year. After many months, the University did not forward the model, but submitted only a very cursory summary of the above numbers, as shown in Display 21, which shed little additional light on the subject.

Given the absence of further detail on capital outlay costs, it is impossible to offer the Legislature any advice on the appropriateness of the \$400 million total. However, the numbers alone raise major questions about the ability of the State to provide the necessary resources. As the Commission has often stated, higher education in California needs over \$1 billion per year in capital outlay spending both to maintain its existing infrastructure and to provide additional space for new students; a number that over the past two years may have risen as high as \$1.7 billion (DOF, 1999).

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*DISPLAY 20 Projected Support Budget Expenditures for the Proposed University of California at Merced, 1999-00 to 2010-11*

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*DISPLAY 21 Capital Outlay Projection for the Construction of the University of California at Merced, Pre-Opening, and 2005-06 to 2010-11 (Millions of Dollars)*

<b><u>Item</u></b>	<b><u>Prior to Opening</u></b>	<b><u>2005-06 to 2010-11</u></b>
Instruction and Research Capacity Space	\$100	\$90
Academic Support (Library, Computer/Media)	55	30
Student Services/Administrative Space	20	10
Infrastructure	75	20
<b>Total</b>	<b>\$250</b>	<b>\$150</b>

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Over the past ten years, the University of California system has received appropriations of about \$174 million per year, or somewhat less than half of an identified need that is almost certainly growing. Proposition 1A (1998) should provide the University with just over \$200 million per year through 2001-02; again, an amount far short of the need.

If the University's aggregated numbers are correct, UC Merced will need about \$50 million per year starting in 2000-01 through 2004-05 in order to open the doors in Fall 2005. Proposition 1A provides some funding for new campuses, but only \$27.5 million per year, and only for 2000-01 and 2001-

02, for a total of \$55 million. If another bond issue similar in scope to the 1998 bond is approved by the voters in 2002 -- and there is no guarantee that it will be -- and provides another \$27.5 million per year in 2002-03 through 2004-05, the University will have received a total of \$137.5 million, just over half of the stated need under what appears at present to be an optimistic scenario.

The University is aware of this problem, of course, and so indicated in a recent report to the Board of Regents' Committee on Finance.

It is apparent that capital funding available through the recently-approved general obligation bond act and potential additional bonds approved after 2002 will not provide sufficient funding for construction of UC Merced or to meet the capital expansion and rehabilitation needs at the existing campuses. Additional State funding mechanisms need to be identified and non-State sources need to be secured to support construction of UC Merced (UC, 1998b).

A resolution was proposed authorizing the President to request an additional \$50 million in capital funds for Merced, and while action on that resolution was deferred, it is apparent that the University will need substantial additional funding if UC Merced is to become a reality.

That problem may not even be the most serious challenge facing the University as it moves the new campus forward. Currently, there is little or no infrastructure at the 2,000-acre boundary of the proposed new campus, and it is abundantly clear that major roadway improvements, as well as utility connections for water, power, sewer, and other services will have to be constructed. The cost of these improvements is probably not the University's responsibility, but will be financed by numerous jurisdictions including federal, State, and local agencies, and probably developers. At present, the only available cost estimate comes from a document included in the University's recent submission in response to Supplemental Budget Language, which suggests a \$304 million cost

for infrastructure “at buildout” (EIP, 1999). This includes facilities for water, wastewater, storm drainage, transportation, schools, environmental mitigation, and other public facilities. It may be reasonably supposed, given the absence of any facilities at present, that most of this cost will be incurred early rather than late, but there is no way the accuracy of the estimates can be determined at this time, nor is there an indication of how the financing might be secured.

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*Economic and  
fiscal efficiency*

Criteria 10.1 and 10.2 relate to economic and fiscal efficiency, and include such ideas as the donation of land. In this, the University is to be commended for securing a 2,000-acre site at a cost of only \$10,000. Beyond that, however, costs promise to escalate rapidly, yet there is reason to believe that the final result will be highly positive. EIP suggests that the total value of the developed properties that will be created around UC Merced should be about \$2 billion, and an earlier economic impact study prepared by two San Francisco consultants (Munroe, 1997) suggested a direct and indirect annual impact on Merced County of \$563 million per year, with additional impacts on surrounding counties. The report also speculated on many other possible positive impacts generated by the campus, but did not attempt to quantify them.

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*Summary*

This section of the Commission’s guidelines calls for a cost “analysis.” From the information supplied, the Commission is satisfied with the support budget information, which is delineated by year and cost category, and is directly related to enrollment projections and student-faculty ratios. While not analytically comprehensive, it meets the requirements of a planning document.

The same cannot be said of the capital outlay data, which are cursory at best. Clearly, the University cannot tell exactly what types of facilities it will need to build until a formal Long-Range Development Plan, including an Academic Plan, are brought into existence and approved by the Regents. Nevertheless, the Legislature currently has very little information on capital costs to inform its appropriation decisions for the Merced campus in the next few years. It is a circumstance that should be corrected in the near future.

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